

Healthy People Living in Healthy Communities



SC DHEC 2004

A Report on the Health of South Carolina's People and Environment

About this book

The title of this book reflects the S.C. Department of Health and Environmental Control's long-term vision for the future of South Carolina, healthy people living in healthy communities. Each chapter addresses a long-term goal from the agency's Strategic Plan. The goals reflect our role as the state's public health and environmental agency in carrying out the three core functions of public health: assessment, policy development and assurance. The goals also build on national efforts in public health such as Healthy People 2010. These goals are statements of long-term changes that will move us toward our vision. For more information on Healthy People 2010, see page 57. A general appendix with more detailed data begins on page 50.

Para informacion en espanol, comunicarse con su departamento de salud local (vea pagina 66).

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A Message from Commissioner C. Earl Hunter

Another year has brought another round of opportunities and challenges for the state's public health agency, a mere snapshot of what you will see in the following pages of the 2004 Healthy People Living in Healthy Communities annual report.

In 2003, DHEC staff rallied to address critical public health issues despite a third year of funding and staff reductions. Internally, our evaluation of programs and services continues with a focus on retaining and enhancing our public health functions of preventing infectious, food and water borne diseases; enforcing laws and regulations for public health and environmental protection; and preventing chronic diseases.

Some of our successes over the past year include the further development of our public health preparedness efforts statewide, including our epidemiological surveillance and lab capacity as well as our partnership with law enforcement and other agencies to assure a safe South Carolina. A real-time test of our abilities occurred in October 2003 with the discovery of the poison ricin in an Upstate postal facility, which drew national attention to the apparent poisoning attempt. Each day, we are tasked with responding to emergencies, outbreaks and new infectious diseases throughout the state, and our preparedness continues to improve.

Also last year, another partnership effort began, one to develop and promote legislation to assist the state's critically ailing trauma system. Our partnerships with local governments to address air quality standards, our work toward protecting our natural resources along the coast, and our statewide assessment of children's oral health needs all were accomplished by staff willing to take on more responsibilities with less resources.

Our challenges ahead are many. We continue to look more closely at the effectiveness of some programs in the wake of funding reductions. We are addressing our technology needs, researching best practices nationwide as well as worldwide, and identifying any barriers to customer service.

We appreciate the participation of our public health partners over the past year, and our hope in the coming year is that you will continue to support the health and environment of South Carolina and to offer your thoughts on what we can do to be the best public health agency in the nation.

C. Earl Hunter



Chapter 1

Increase Local Capacity to Promote and Protect Healthy Communities

Carolina Jasmine

We live in a complex, interconnected global society in which there are many threats to, and opportunities to improve, the public's health. In addition to protection of communities through regulatory activities, DHEC follows the guidance of stakeholders, including affected communities, to focus on information access, community planning, environmental education and public participation to assure that all South Carolinians live in healthy communities.



What is a healthy community?

A healthy community embraces the belief that good health encompasses physical, emotional, social and economic well-being in communities with clean air, water and soil.

While the traditional public health focus has sought personal behavior change to prevent disease, there has been a growing awareness that the physical environment contributes to good health. Recent research also points to the physical environment as a contributor or detriment to good health. Not only do toxic pollutants in the environment contribute to poor health, but the layout of our cities, suburbs and infrastructures can promote or deny opportunities for healthy lifestyles. Planned communities can offer opportunities for walking, reduce the dependence on personal vehicles and the injuries and emissions they can cause, and can allow nature to assist in the cleansing of the environment from human impacts.

Partnerships can be one of the most effective tools available to improve the health of the public and their communities. Partnerships can create opportunities to use scarce resources more effectively to bring the community closer together, reduce high-risk behaviors and solve community problems. Only through collaboration and partnership can desired results be achieved.

Partnership launches state cardiovascular plan

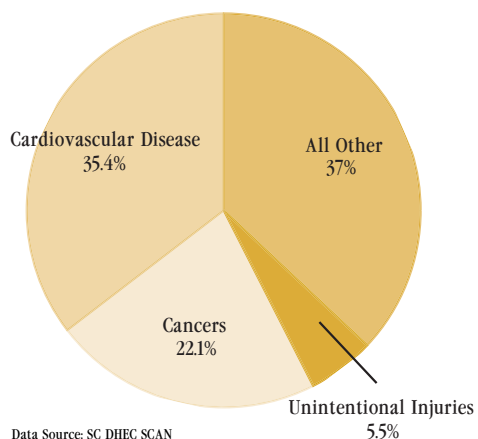
A public-private partnership released a state action plan in September 2003 designed to prevent and reduce heart disease and stroke in South Carolina. The Cardiovascular Health State Plan 2002-2007 focuses on promoting policy, systems and environmental changes to provide for improved health and quality of life for South Carolinians. The plan

is the product of a number of statewide partners, including the American Heart Association, that have a vested interest in the health and wellness of South Carolina. It addresses cardiovascular disease across the spectrum, from promoting healthy lifestyle choices to evidence-based best practices for health care practitioners who treat cardiovascular disease. Anyone involved in cardiovascular health can use the plan to find steps for action to make their communities a healthier place to live. Cardiovascular disease is the leading cause of death and disability in South Carolina (see cardiovascular disease data on pages 9, 55 and 56).

► <http://www.scdhec.gov/cvh> or (803) 898-9560



Leading Causes of Death 2002



Data Source: SC DHEC SCAN

Access to data improves

The S.C. Community Assessment Network (**SCAN**) is an interactive data retrieval system for birth and death certificate data, demographics and other public health information. Researchers, planners, reporters, community assessors and others can now generate statistics through a new interactive Web site located at <http://scangis.dhec.sc.gov/scan/>. Users can create interactive tables, bar charts, trend lines and maps according to their interests and specifications at health district, county or zip code level. Data also can be broken down by year, age, race and gender. To supplement these tables the user can also map these statistics out to either the county or zip code level. Birth and death certificate data, demographics and PRAMS (Pregnancy Risk Assessment Monitoring System) survey results are the first datasets available on the SCAN system. Future datasets include the S.C. Central Cancer Registry, infant mortality, tuberculosis, lead poisoning, maternal and child health and other datasets related to DHEC's Health Services.

Increase Local Capacity to Promote and Protect Healthy Communities

DHEC oversees safe dining

South Carolina has almost 16,500 food service facilities, an increase of more than 2,000 since 1993. The number of sufficiently trained food service inspectors has not kept pace with this growth. South Carolina currently falls below the U.S. Food Drug Administration's recommended four unannounced inspections per year per facility, averaging only 2.03 per year. Based on historical data, facilities in the state require an average follow-up rate of half the number of unannounced inspections; South Carolina currently averages only .98 follow-ups per year, and those rates have dropped since 2002 because of the increasing numbers of food service facilities and the lack of funding for new inspectors. Additionally, DHEC's Bureau of Environmental Health's Food Protection Division has conducted workshops in communities to assist owners and operators of food service operations in understanding the state's food safety laws and to better protect the public's health with food safety practices in their own local facilities. In 2001, the bureau trained 1,400 food service workers. In 2002, that number dropped significantly—to roughly 100 —because of budget limitations.

► <http://www.scdhec.net/foodscore>

Retail Food Establishment Permit



Ongoing challenges, new approaches

Improved rural health care access

South Carolina is a rural state. Improved access to rural health care services is a critical part of meeting our public health needs. The purpose of DHEC's Office of Primary Care is to improve access to primary health care services. A key role of the office is to recruit physicians and other health care providers into rural and underserved areas of South Carolina.

Through its administration of the National Health Service Corps and J-1 Visa Waiver Programs, DHEC assisted in the placement of 58 providers in program year 2003. These providers, who agree to see all patients regardless of insurance status or ability to pay for services, were placed in sites located in **Health Professional Shortage Areas (HPSAs)**.



The President's Initiative to increase those served by Community Health Centers by 2005

DHEC's Office of Primary Care assists the S.C. Primary Health Care Association in providing data and other technical assistance to communities interested in applying for Community Health Centers (CHC) grants. These grants can be expansion grants, through which an existing CHC grantee seeks funding to move into a new service area, or they can be new-start grants, through which a community seeks funding for a new CHC organization. Since the President's Initiative began in January 2001, South Carolina has been awarded five expansion grants and two new starts. Several other applications have been approved but not funded, but could be funded in future grant cycles.

Trauma center legislation introduced

Accidental **injuries** claimed the lives of nearly 2,065 South Carolinians in 2002, many of them children and young adults. That number has been increasing every year since 1997. Trauma centers are voluntary systems that provide highly skilled care for these critically injured residents, but South Carolina's trauma system is in critical and unstable condition itself.

Providing trauma care is expensive, with costs exceeding any potential reimbursement. The 23 hospitals currently designated as trauma centers commit enormous resources in personnel, medical specialties, equipment, training and administrative oversight to provide this specialized care. State-level funding is needed to provide an infrastructure to support this system and to provide direct financial support to hospitals, physicians, rehabilitation centers and emergency medical service providers who care for the injured. Legislation introduced in 2003 would authorize DHEC to set standards for trauma center level designations, regulate trauma centers, empanel a statewide trauma advisory council, establish a trauma care fund for administering and oversight of the system, and provide direct reimbursements to hospitals that choose to provide trauma care.



Increase Local Capacity to Promote and Protect Healthy Communities

DHEC maintains shortage designations

More than 30 federal programs use HPSA and Medically Underserved Area designations as criteria for allocation of resources. DHEC's Office of Primary Care maintains these designations for South Carolina and strives to designate as much of the state as possible, thereby allowing entities in the state to benefit from federal resources.

Preparing for emerging public health threats

Because of the increase in the awareness of emerging public health threats, the public health system must be prepared for the unexpected. The federal Centers for Disease Control and Prevention and the Health Resources

Services Administration has awarded more than \$20 million in grants to help South Carolina improve its ability to investigate and identify disease outbreaks, improve hospitals' response to an incident causing many injuries or illnesses, and to support laboratories. The grants provide enhanced epidemiological, technological and laboratory capacity for the state.

The benefit of this funding is not limited solely to a potential **bioterrorism** event. Increasing the public health capacity to respond to an outbreak, regardless of origin, provides resources that have a "dual use." Resources are being used to strengthen public health disease control, emergency response and other basic public health services.

DHEC has established strategic leadership and direction for improving **public health response and preparedness for emergencies**. The state Emergency Operations Plan laid the framework for developing a public health response plan covering a potential bioterrorism event or influenza pandemic. Specific accomplishments include:

- integrated bioterrorism planning efforts;
- formation of smallpox response teams;
- improved rapid communication and disease-investigation network between staff and external partners, including the State Poison Control Center, state veterinarian and agricultural agencies;
- bioterrorism training and educational initiatives including a partnership with the USC Arnold School of Public Health, establishing a Public Health Preparedness Academy; and
- a public health preparedness media campaign for South Carolina.

► <http://www.scdhec.net/ophp>



Laboratory capacity enhanced

Two new laboratory sections have been established at DHEC's Bureau of Laboratories to detect and identify both **biological and chemical warfare agents** and enhance public health laboratory testing capabilities for anthrax, plague, vaccinia, **chickenpox**, SARS, **monkey pox**, and **West Nile virus**. DHEC's Special Pathogens Laboratory and Chemical Terrorism Unit focus on testing for biological agents and chemical agents, respectively. Both counter-terrorism laboratories have hired and trained staff to perform a variety of sophisticated tests, using newly acquired advanced instrument systems provided through federal funding. Tests are performed on both human specimens submitted by physicians and hospitals and on forensic evidence submitted by law enforcement. Having access to reliable reference laboratory testing that can identify unusual infectious diseases caused by microbial pathogens and illnesses caused by toxic chemicals can more rapidly protect community health.

Community outbreaks and emergency response

2003 was a record year for **West Nile virus** and eastern equine encephalitis, aseptic meningitis from the unusual ECHO 9 virus, pertussis (whooping cough) and shigella diarrhea/dysentery. An imported prairie dog created a possible **monkey pox** threat, a "real" bioterrorist threat with ricin toxin occurred in the Upstate, the earliest **influenza** year in recent memory emerged, and a major outbreak of waterborne rash infection in November 2003 hit Richland County. New resources from federal **bioterrorism** grants helped DHEC respond to these acute communicable diseases.

Additional resources:

National Healthy Communities programs

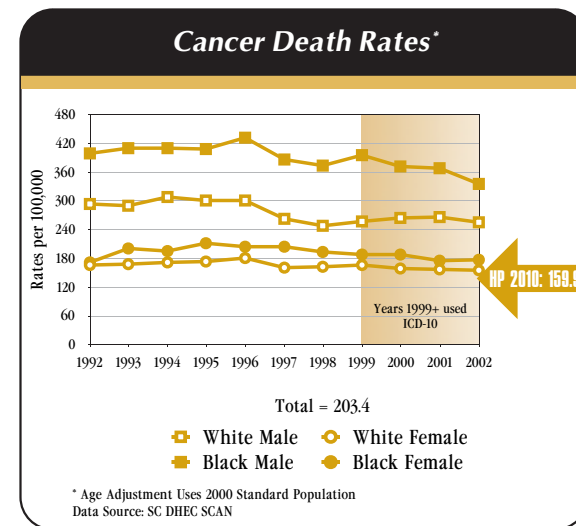
► <http://www.ncl.org/cs/services/healthycommunities.html>



Chapter 2

Improve Health for All and Eliminate Health Disparities

Eliminating health disparities is a national priority embraced by South Carolina. The National Institutes of Health have defined health disparities as “differences in the incidence, prevalence, mortality and burden of diseases and other adverse health conditions that exist among specific population groups in the United States.” The conditions that disproportionately affect minorities living in South Carolina are cancer, cardiovascular disease, diabetes, HIV/AIDS, immunizations and infant mortality. Eliminating these specific health conditions coincides with the Healthy People 2010 goals for the nation. If sufficient attention and resources are allocated, a marked reduction in health disparities will occur and an overall improvement in health status for all South Carolinians will be achieved.



Early detection of cancers improves outcomes

Higher percentages of ethnic minority women were diagnosed with late stage **breast and cervical cancer** than were white women (41.3 percent and 30.9 percent for breast and 45.5 percent and 25.2 percent for cervical, respectively). A higher percentage of ethnic minority men were also diagnosed with late stage **prostate cancer** than were white men (21.8 percent and 17.1 percent, respectively). The likelihood of cancer survival is lower when diagnosed at a late stage. Early detection helps diagnose cancers in the early stages when treatment is more effective and successful.

Among South Carolina women, **breast cancer** is the most commonly diagnosed cancer, regardless of race. It accounts for 31 percent of all female cancer cases (see cancer-specific charts by adult age groups beginning on page 53). In 2004, approximately 3,300 new breast cancer cases will be diagnosed among South Carolina women, according to the American Cancer Society (ACS).



While **cervical cancer** is preventable, the ACS estimates that in 2004, approximately 160 new cervical cancer cases will be detected among South Carolina women. In addition, South Carolina's death rate of 3.7 per 100,000 is 23.3 percent higher than the U.S. rate.

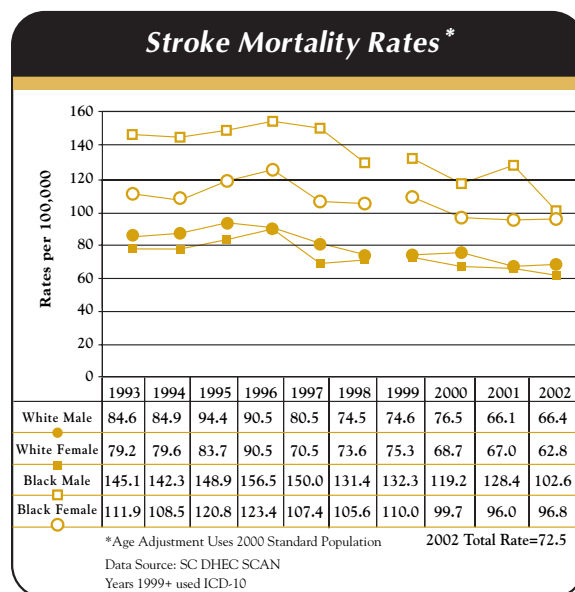
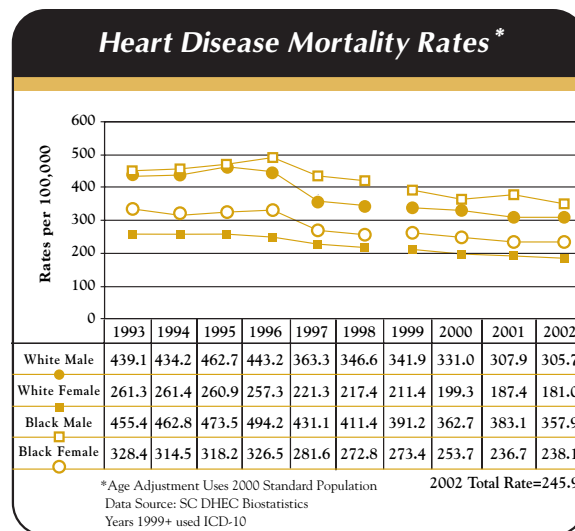
In South Carolina, **prostate cancer** is the most commonly diagnosed cancer among men, regardless of race. It accounts for 30 percent of all male cancer cases. In 2004, approximately 4,770 new prostate cancer cases will be diagnosed among South Carolina men, according to the ACS. In addition, South Carolina's death rate of 41.7 per 100,000 is 26.7 percent higher than the U.S. rate.

► <http://www.scdhec.gov/HS/comhlth/Cancer/index.htm>

Cardiovascular disease is leading cause of death

Coronary heart disease and **stroke** are the principle components of cardiovascular diseases (CVD). These diseases affect African-American men and women more severely than whites. Black men are more than twice as likely to die of cardiovascular disease, while black women have 50 percent more strokes than white women. Cardiovascular disease causes more than 36 percent of all deaths in South Carolina, making it the leading cause of death in the Palmetto State (see heart disease and stroke data by adult age groups beginning on page 55). South Carolina's age-adjusted death rates for stroke (72.5 deaths per 100,000) and heart disease (245.9 deaths per 100,000) in 2002 exceeded the Healthy People 2010 goals of no more than 48 and 166 deaths, respectively, per 100,000.

In response to the crisis, DHEC's Division of Cardiovascular Health has been developing goals and objectives that address cardiovascular disease. Based on the toll that CVD takes on South Carolinians, DHEC, in collaboration



Improve Health for All and Eliminate Health Disparities



with its partners, is implementing a plan to address the challenges of this disease. This plan focuses on policy and environmental changes toward improved cardiovascular health for South Carolinians. Work site and community wellness programs, as well as health system policy changes, are targets of the efforts (see page 2).

📍 <http://www.scdhec.gov/cvh>

Diabetes on the rise

Diabetes is the sixth leading cause of death in South Carolina and has an immense impact on public health and medical care. The overall prevalence of diabetes has increased over the past 14 years, from 5.6 percent in 1988 to 8.1 percent in 2001. It increased persistently from 1997 to 2001, with the most dramatic increase (130 percent) among black men. The statewide prevalence in the black and other

ethnic minority populations at 10.6 percent is higher than in the white population (7.3 percent). However, the racial disparity is narrowing, not because of an improvement in the minority rates, but rather because of an increase in the white population. Claiming 1,114 South Carolinians in 2002, diabetes increases an individual's risk for blindness, lower extremity amputation, kidney failure, nerve disease, hypertension, ischemic heart disease and stroke. More than 350,000 South Carolinians are affected by diabetes, many of which are undiagnosed. One of every seven patients in a South Carolina hospital has diabetes. The total direct and indirect costs of hospitalizations and emergency room visits were more than \$928 million for diabetes in 2001.

The complications of diabetes can be prevented or delayed through improved blood sugar control and control of elevated blood pressure and high cholesterol, use of specific drugs for protein loss in urine, improved nutrition, exercise, foot care



and low dose aspirin therapy. The challenge is to make health professionals and individuals with diabetes fully aware of these guidelines and to take immediate medical action.

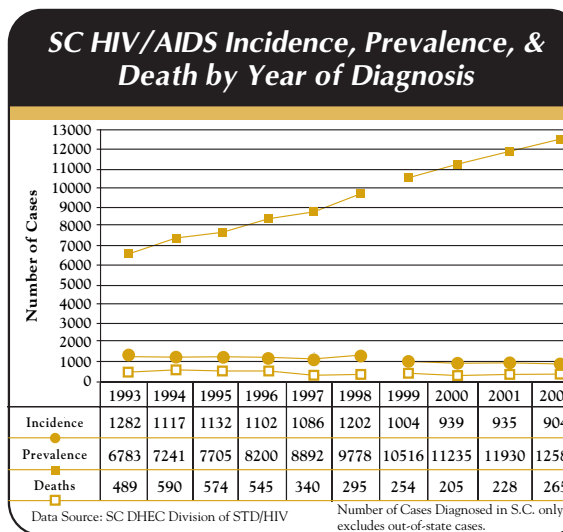
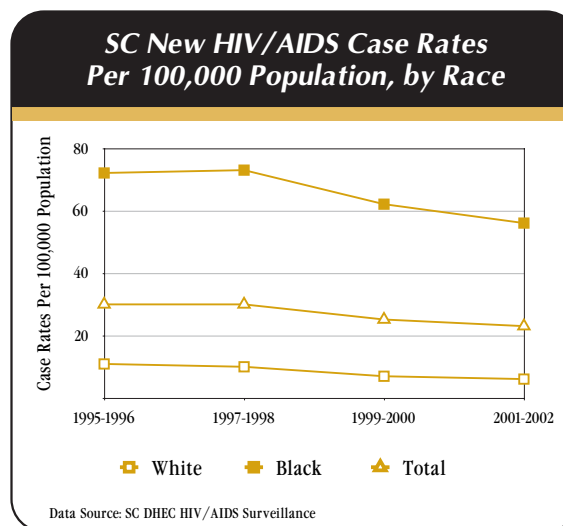
The S.C. Diabetes Prevention and Control Program (SC DPCP) works with providers in office-based practices in medically underserved areas of the state to increase diabetes self-management skills in patients. The SC DPCP has agreements with eight of the 19 state Community Health Centers, which participate in the National Diabetes Collaborative. The SC DPCP works with the centers to improve diabetes care by increasing the percentage of people with diabetes who receive the recommended foot and eye exams, influenza and pneumonia vaccinations, and hemoglobin A1c tests. Likewise, the partnership is working toward reducing health disparities for populations at risk for diabetes.

➤ <http://www.scdhec.gov/hs/comhlth/diabetes/index.asp>

HIV/AIDS continues to rise

South Carolina ranked seventh among states and the District of Columbia with a case rate of 20.3 per 100,000 for AIDS cases reported through December 2002, according to the Centers for Disease Control and Prevention HIV/AIDS Surveillance Report. The number of people living with HIV, including AIDS, continues to steadily increase in South Carolina. As of December 2002, there were more than 12,500 people living with HIV/AIDS. More than 900 persons are newly diagnosed with HIV (including AIDS cases) each year. New HIV treatments and strengthened HIV care services have contributed to a 55 percent decrease in deaths due to HIV/AIDS from 1994 through 2002.

- African-Americans account for 30 percent of the state's population, but 77 percent of the HIV/AIDS cases recently diagnosed in South Carolina.



Improve Health for All and Eliminate Health Disparities

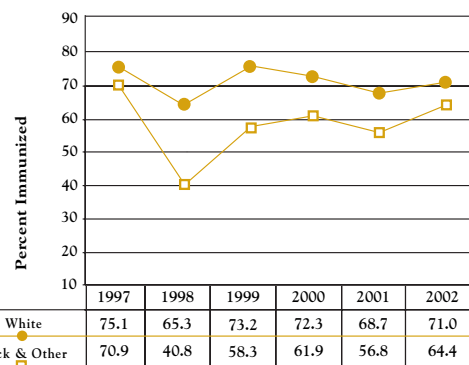
- African-American men and women have been hardest hit by the epidemic. Three of every four men becoming infected are African-American (75 percent), and more than eight of every 10 women diagnosed (84 percent) are African-American.
- Youth and young adults of all races 13-24 years accounted for 13 percent of the new HIV/AIDS diagnosed in South Carolina.
- The rate per 100,000 population in 2002 of people living with HIV/AIDS is five times higher for black males than for white males and 12 times higher for black females compared with white females.
- Reported HIV/AIDS case rates are nine times higher for African-Americans compared with whites in South Carolina.

Flu, pneumonia vaccination disparity improving

Influenza (the flu) and pneumonia together are the eighth leading cause of death in South Carolina, claiming 908 residents in 2002. Nationally, about 20,000 deaths a year are attributed to flu. Ninety percent of deaths from the flu occur among people ages 65 and older (see page 44). Medicare costs for influenza-related hospitalizations in the United States can reach \$1 billion each year. A one-time dose of pneumonia vaccine and annual flu shots are the primary methods for preventing these diseases and their severe complications. (For S.C. and U.S. comparison on pneumonia vaccination, see page 64.)

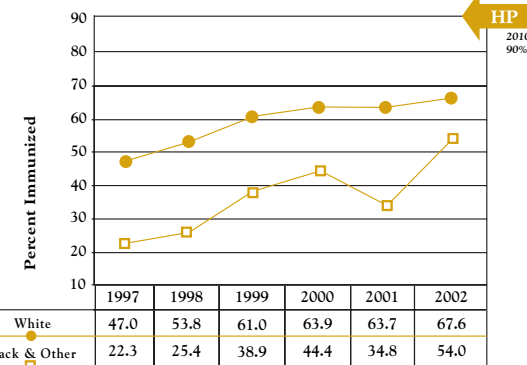
While South Carolina's pneumonia and influenza vaccination rates for both non-Hispanic whites and non-Hispanic African-Americans over age 65 are slightly better than the national average, rates for African-Americans

Persons Ages 65+ Who Ever Received an Influenza Vaccine by Race



Data Source: SC DHEC BRFS

Persons Ages 65+ Who Ever Received a Pneumococcal Vaccine by Race



Data Source: SC DHEC BRFS

remain lower than rates for whites. However, data show disparity gaps are closing for both of these preventive measures. The pneumococcal vaccination disparity gap closed from 28.9 percent in 2001 to 13.6 percent in 2002. The influenza vaccination disparity gap closed from 11.9 percent in 2001 to 6.6 percent in 2002. Flu and pneumonia vaccination rates for South Carolina's Hispanics are not available.

An important role for clinicians and public health professionals is educating patients about the benefits and risks of annual influenza vaccination and appropriate pneumonia vaccination. Accurate information and messages play an important role in helping people overcome past perceptions and make the important decision to receive a vaccination.

► <http://www.scdhec.gov/HS/diseasecont/immunization/about.htm>

Infants die at disparate rates

Infant mortality is one of the six priority health disparity areas in South Carolina and should be included in any health disparity effort. The infant death rate for African-Americans in South Carolina (15.4 deaths per 1,000 live births in 2002) is more than twice that of whites (5.9 deaths per 1,000 live births). The percent of African-American babies born with low birth weight (14.5) is almost twice that of whites (7.5). Nationally, African-American mothers in every age category—not just teens—have a greater risk of losing their babies than white mothers of similar age. College-educated black women also experience a disparate rate of infant deaths. Planning pregnancy and receiving early and adequate prenatal care are steps toward improvement, but not the only solutions (see pages 18 and 51 for more data and information on infant deaths).





Improve Health for All and Eliminate Health Disparities

Ongoing challenges, new approaches

New approaches can address HIV/AIDS crisis

While the number of new HIV infections diagnosed each year appears to be level, people are still being diagnosed late in their disease. Forty-one percent first find out that they have HIV less than one year before AIDS diagnosis. The Centers for Disease Control and Prevention estimates that one in four Americans living with HIV are unaware of their infection, and most new infections are from people who do not know they are infected.

New approaches to fighting HIV include urging more HIV testing in both medical and non-medical settings for early diagnosis and entry into treatment and prevention services. New rapid HIV tests delivered by community organizations and local health departments will help reach people earlier in South Carolina.

Partnership continues health disparity focus

The S.C. General Assembly has directed DHEC to develop a plan to eliminate health disparities by eliminating duplication and coordinating state and federal resources and services. As a result, DHEC assembled a work group involving stakeholders with a responsibility for ensuring the health of South Carolina's citizens. The **Health Disparities** Workgroup was chaired by the DHEC deputy commissioner for Health Services and staffed by DHEC's Office of Minority Health. The work group was composed of representatives from state agencies and other public and private organizations.

The work group developed seven recommendations to assist in coordinating efforts and implementing

strategies to reduce health disparities in South Carolina. The recommendations are:

- create a single, shared definition for health disparity and health disparity initiative;
- establish a health disparity board;
- develop a statewide database of health disparity programs and initiatives;
- establish a system of accountability for outcomes;
- invest more funding in prevention and education;
- establish opportunities for collaboration and partnership development; and
- implement models of community development.

DHEC's Office of Minority Health is developing a statewide database for health disparity programs and initiatives, and collaboration and partnership efforts that address health disparities have increased substantially.

➤ <http://www.scdhec.gov/HS/omh/index.html>

Obesity results in both economic and health consequences

The prevalence of adult obesity in South Carolina costs \$1 billion in medical expenditures, with about half of the costs being funded by Medicare and Medicaid. Obesity-related expenditures represent approximately 6 percent of South Carolina's annual health care bill, according to research published in January 2004 in the journal *Obesity Research*.

Adult obesity is a risk factor for major health conditions, including diabetes, heart disease, high blood pressure, stroke, gallbladder disease, certain cancers, and osteoarthritis (see adult obesity data, page 60). Such conditions and disease

processes will continue to increase the costs to the health care system.

DHEC is implementing the first year of a grant that will address obesity issues. Efforts will focus on balancing caloric intake and expenditure; increasing fruit and vegetable consumption; increasing breastfeeding; increasing physical activity; and decreasing patient screening time. The grant will help bring together a statewide partnership to address obesity prevention and control with representatives from nonprofits, academia, health care, private partners and others. The target populations are community organizations, schools, health care settings and work sites. A statewide comprehensive plan to address obesity prevention and control will be developed. This will document the impact that obesity is having within our state and outline goals and activities that can reduce this impact.

Additional resources:

American Cancer Society

► <http://www.cancer.org>

Centers for Disease Control and Prevention
Office of Minority Health

► <http://www.cdc.gov/omh/default.htm>

National Institutes of Health

► <http://www.nih.gov>



Chapter 3

Assure Children and Adolescents are Healthy

Hydrangea

Healthy behaviors by children and teens and a healthy start as life begins build the foundation for healthy adults. Planning for a healthy baby starts before conception, and health initiatives must inform and educate families of their role in bringing healthy children into the world and helping them grow into healthy adults. Establishing and maintaining healthy behaviors in the teen years increases the likelihood that teens will continue making good lifestyle choices throughout life and lessen their risks of chronic diseases later in life. Exercise, proper nutrition, maintaining an appropriate weight and not smoking are important keys to a healthy life.

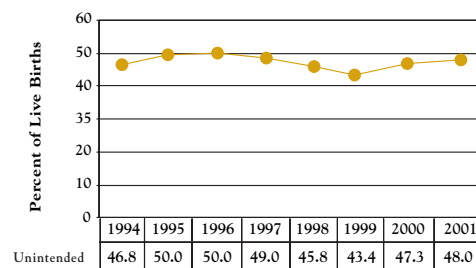


Planning for pregnancy improves baby's health

Women who become pregnant when they did not want to be pregnant at all (called unwanted pregnancy), or who did not want to become pregnant at that time (called mistimed pregnancy), added together make up the total number of women considered to have had an **“unintended” pregnancy**. Women who are unintentionally pregnant are more likely to not take care of themselves and their child, and they also have a greater chance of having a baby who is not healthy at birth. In 2001, the most current year available, 48 percent of women in South Carolina giving birth became pregnant unintentionally, slightly up from 2000. Black women were almost twice as likely as white women to have an unintended pregnancy (66.4 percent for black women compared with 38.3 percent for white women). The state is far from the Healthy People 2010 goal for the nation of no more than 30 percent of pregnancies to be unintended.

► <http://www.scdhec.gov/hs/mch/wcs/fp.htm>

Percent of S.C. Women Giving Birth Whose Pregnancy was Unintended



Data Source: PRAMS

No 2002 data available

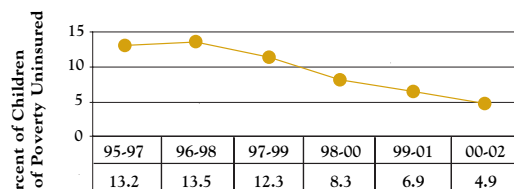
Early and continuous prenatal care important for pregnant women

Early and continuous prenatal care is important for all pregnant women for their own well-being and for the well-being of their growing fetus. The overall percent of women entering prenatal care during the first three months of pregnancy has not improved recently in South Carolina, nor has the gap between black and white women accessing care early changed significantly (see data, page 51). In 2002, 77.7 percent of all pregnant women began their prenatal care in the first trimester (82 percent for white and 69.8 percent for black women and women of other racial and ethnic minorities). The state is far from the Healthy People 2010 goal for the nation of 90 percent. The state is also far from the 2010 goal of 90 percent of pregnant women receiving adequate prenatal care (an appropriate number of visits). In 2002 in South Carolina, 75.2 percent of all pregnant women received adequate care (78.1 for white and 69.7 percent for black and other women).

► <http://www.scdhec.gov/HS/mch/wcs/flexedtmp.htm>

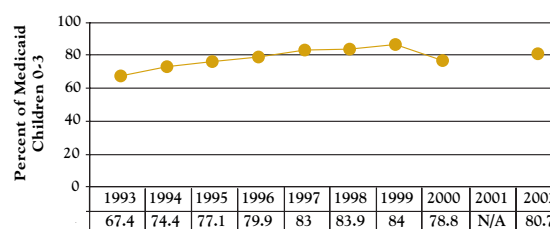


Percent of S.C. Children* Uninsured Birth to 19



*Children Under 200% of Poverty
Data Source: CPS

Percent of S.C. Children on Medicaid who Received a Primary Care Service



Data Source: S.C. Department of Health and Human Services

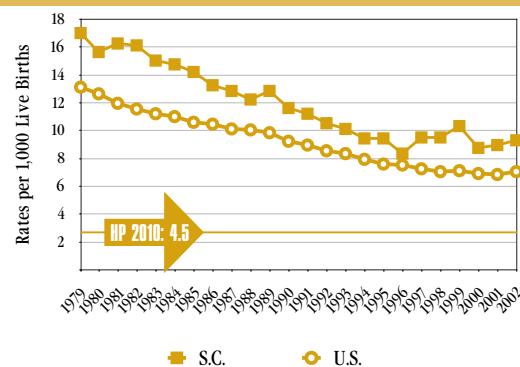
Assure Children and Adolescents are Healthy

Infant deaths worsen

South Carolina's infant death rate worsened in 2002, during which 9.3 infants died for every 1,000 live births, compared with 8.9 in 2001 and 8.7 in 2000. The historical disparity between black and white infant death rates in South Carolina also continued in 2002, with the black infant death rate being more than three times greater than the white rate (15.4 compared with five per 1,000 births. See data, page 51). South Carolina remains far from the United States rate of 6.8 (in 2001) as well as the Healthy People 2010 goal for the country of no more than 4.5 deaths per 1,000 live births. (For more on infant death disparities, see page 13.

- <http://www.scdhec.gov/HS/omh/infant.html>
- http://www.scdhec.gov/co/phsis/biostatistics/an_pubs/2002IMRandbirthsCharacteristics.pdf

US, SC Residents Infant Death Rates



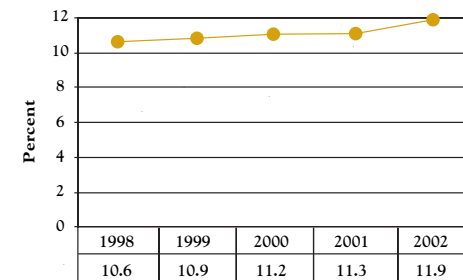
Data Source: SC DHEC SCAN
National Center for Health Statistics

Prematurity increasing

Babies born too early (before 37 weeks gestation) are more likely to die early, suffer lifelong consequences, and cost society millions of dollars each year in additional hospitalization and medical care. In South Carolina the percent of babies born early is increasing, standing at 11.9 percent in 2002.

The March of Dimes in South Carolina, with strong support from DHEC, is implementing a Premature Birth Campaign, with the two goals of raising awareness of the problems of prematurity and to decrease the preterm birth rate in the state. Four committees (Birth Prevention Projects, Education, Communications, and Public Affairs/Advocacy) will address the problem in a comprehensive manner.

Live Births of Less Than 37 Weeks Gestation



Data Source: SC DHEC Biostatistics

Postpartum newborn home visits lacking staff

Postpartum newborn home visits to the Medicaid population in South Carolina can make a positive difference in outcomes for newborns and are a cost-effective element of health care for this population. Under this program, Medicaid pays for a post-hospital discharge home visit to assess the environmental, social and medical needs of Medicaid-eligible infants as well as the family planning and other maternal health assessments and education needs of the mother. In home visits, nurses can identify infant problems early, such as poor weight gain, heart murmurs that develop after the first few days, blood pressure problems in the mother, etc. Nurses also can help the family find a medical home for the infant and stress the importance of well child care visits and immunizations. They also can assure that postpartum mothers receive their six weeks checkup and obtain family planning guidance. In 2002, DHEC provided about 91 percent of all Medicaid newborn home visits. Although the target for the state is 90 percent of all Medicaid newborns discharged from a hospital to receive a newborn home visit, only about 69 percent received a visit, primarily because of the critical nursing shortage DHEC is facing.

► <http://www.scdhec.gov/hs/mch/wcs/nbhv.htm>



AME Church partnership reaches out to women

The important and innovative partnership between DHEC, the March of Dimes and the AME Church continued this past year. Next year, the partnership will focus on:

- conducting trainings on infant deaths, its causes and ways to reduce risks. Church and public health leaders were trained in year one, and a standard curriculum has been developed, ensuring a consistent message and information presented across the state;
- having ministers distribute vitamins as part of premarital counseling and encouraging women to consume folic acid every day;
- developing a prenatal component to provide information about prematurity, the signs of preterm labor, and emphasize the important role fathers play. This component will include district “baby showers” that will highlight key messages about improving birth outcomes to attendees. The gifts brought to the shower will be placed in baskets given to parents-to-be in the AME Church. March of Dimes education flyers and pamphlets on preterm labor and the “Men Have Babies, Too” guide will be included in the baskets as well; and
- making financial resources available to DHEC districts and congregations to implement local strategies to increase awareness of infant mortality and the ways to improve birth outcomes.

Assure Children and Adolescents are Healthy

Increased newborn screening requirements approved

Through newborn screening, all infants are tested at birth for certain disorders that cause mental retardation, abnormal growth and even death. In January 2003, the DHEC board approved a major expansion in the number of disorders covered by the newborn screening test panel. When the new test panel is implemented, all newborns in South Carolina will be tested for cystic fibrosis, biotinidase deficiency and many other disorders caused by defects in the way the body uses fats and amino acids. When this panel is implemented, South Carolina will have one of the most comprehensive newborn screening panels in the nation.

► <http://www.scdhec.gov/hs/mch/wcs/nbscr.htm>

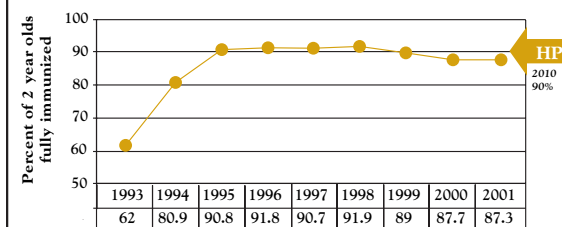


Immunizations for 2-year-olds remain high

DHEC has moved much of its direct childhood immunization efforts to the private sector by establishing immunization partnerships and encouraging medical homes for children. DHEC's primary role now is to work with private providers to make sure that children are getting timely and complete immunization coverage in the state. Despite this transition, the coverage level for 2-year-olds in 2001 continued to be high in the state, with South Carolina close to meeting the Healthy People 2010 goal for the nation of at least 90 percent coverage (see additional data, page 64).

► http://www.scdhec.gov/HS/diseasecont/immunization/child_vacc.htm

S.C. Immunization Coverage Rates* Children Age 2



4 DTP, 3 Polio, 1MMR, 3 Hib

*Birth Registry Survey Division of Immunization

No 2002 data available

Preventative oral health services receive funding

A statewide partnership led by DHEC launched a \$960,000 pilot project called “More Smiling Faces in Beautiful Places” aimed at improving oral health and access to dental care for young children and special needs individuals. The project, funded by the Robert Wood Johnson Foundation, kicked off in Chesterfield, Marlboro, Marion, Greenwood, McCormick and Hampton counties. The three-year grant allows South Carolina to work with local medical providers to link minority children and special needs individuals with oral health care, train dental providers to care for special needs persons and children from birth to 6 year of age, and educate those underserved families about oral health and its importance in a person’s overall health and well-being.

Eight community water systems received \$76,500 in 2003 to repair or replace fluoridation equipment to help reduce tooth decay, an example of how good environmental and public health efforts join to benefit South Carolinians. The funds will allow public drinking water systems to repair or upgrade equipment to provide just the right amount of fluoride for good dental health.

► <http://www.scdhec.gov/hs/mch/childcare/oral.htm>

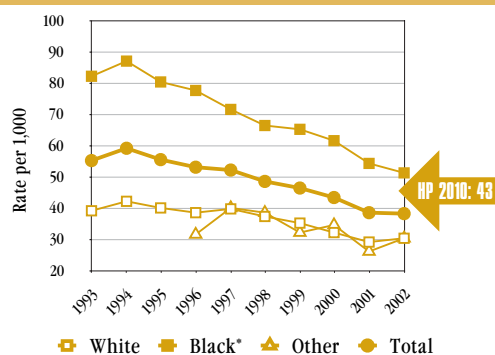


Teen pregnancy drops

The pregnancy rate among teens 15-17 in South Carolina declined in 2002 for black teens and increased for white teens and teens of other racial and ethnic minorities (others). From 1996 through 2002, the rate decreased 22 percent for white, 34 percent for black, and 2 percent for other teens. The pregnancy rate for black teens is still considerably higher than for white teens, but encouragingly, the disparity is decreasing over time (see additional data, page 52).

► http://www.scdhec.gov/co/phsis/biostatistics/an_pubs/2001%20Teen%20Preg.pdf

Trends in SC Adolescent Pregnancy Rates by Race, Ages 15-17



*Prior to 1994-1996, Black includes Black & Other
Data Source: SC DHEC BIOSTATISTICS

Assure Children and Adolescents are Healthy

Childhood deaths from unintentional injuries leading cause of death

Unintentional injuries (commonly known as accidents) kill more children ages 1 to 14 in South Carolina than any other cause of death. From 2000 through 2002, 269 children ages 1 to 14 died in South Carolina from unintentional injuries. In 2002, the death rate was 12 per 100,000 children ages 1 to 14 (see data, page 51) .

DHEC's Division of Injury and Violence Prevention coordinates efforts to reduce unintentional injuries in children through the Child Passenger Seat Program, the Child Fatality Advisory Committee, the Traumatic Brain Surveillance Program and the Residential Fire Injury Prevention Program.

- The Child Passenger Seat Program provides child passenger seat distribution and education to reduce unintentional death and injuries of young children.



- The Traumatic Brain Surveillance Program provides useful population-based hospital discharge data to support the need and effectiveness of programs such as the Child Passenger Seat Program.
- The Residential Fire Injury Prevention Program focuses on children under 5. Smoke alarm installation and fire safety education is provided to the families of these children to reduce the risk of death and injury from residential fires.
- The Child Fatality Advisory Committee provides annual statistical studies of the incidences and causes of child deaths in the state. This information is used to develop effective programs addressing the reduction of unintentional fatal injuries in this population.

Ongoing challenges, new approaches

Risky teen behaviors lead to lifelong health problems

Tobacco as a gateway drug to other risky behaviors is a threat to adolescent health. In the 2003 **Youth Risk Behavior Survey (YRBS)**, 25.8 percent of respondents in South Carolina said they were current smokers. DHEC's Division of Tobacco Prevention and Control addresses this high rate of smoking through its development of and participation in a youth movement against tobacco use modeled on successful programs in other states such as Florida. The movement's beginnings centered on development of a brand identity for and by youth. This identity, *Rage Against the Haze*, has grown in membership from 98 members in July 2003 to 438 members in January 2004. The dramatic increase occurred without any major mass media campaigns. The approach of "viral"

marketing (word-of-mouth marketing from youth to youth) to increase membership is clearly working. Because adoption of public policy is shown to make the most lasting impact on tobacco use behaviors, future efforts of this movement will center around policy change in local communities, including school districts, with merchants selling tobacco products to underage youth, and in ordinances with local governments for smoke-free public environments.

► http://www.scdhec.gov/hs/comhlth/risk/tobacco_control.htm

Obesity becomes epidemic

Youth in South Carolina continue to show increasing rates of overweight/obesity. According to the 2003 Youth Risk Behavior Survey, 28 percent of South Carolina high school students are overweight or at risk for becoming overweight. Of those, African-American and Hispanic/Latino students experience disproportionately high rates of overweight/obesity compared to Caucasian students. Disadvantaged young children are also greatly affected. Twenty-six percent of low-income children in South Carolina ages 2 to 5 are overweight or at risk for being overweight, according to data provided through the Women's, Infants and Children's supplemental nutrition program. Multiple factors contribute to the overweight/obesity crisis. The 2003 YRBS also indicates only 18 percent of high school students reported eating the recommended five to nine servings of fruits and vegetables per day. Additionally, 40 percent of South Carolina youth report not meeting the minimum recommended levels of physical activity.

Additional Resources:

CareLine

► 1-800-868-0404

Healthy Infants

► http://www.cdc.gov/nccdphp/drh/prams_sc.htm
<http://www.childbirth.org>
<http://www.healthystartassoc.org>

Teen pregnancy prevention

► <http://www.freeteens.org>
► <http://www.scdhec.net/hs/mch/wcs/tp.htm>

Prenatal Care

SC March of Dimes Chapter

► (803) 252-5200
► <http://www.healthystart.net>
► <http://www.scdhec.net/hs/mch/wcs/mat.htm>

Access to Health Care

Child Health Insurance Program, Partners for Healthy Children
► 1-888-549-0820

American Academy of Pediatrics

► <http://www.aap.org>

Children's Defense Fund

► <http://www.childrensdefense.org>

Henry J. Kaiser Family Foundation

► <http://www.kff.org>

Teen tobacco prevention

► <http://www.rageagainsthaze.com/>

Chapter 4

Assist Communities in Planning for and Responsibly Managing Growth

By 2010, 4.3 million people are expected to live and work in South Carolina. Like many Southeastern states, our state is growing rapidly, and protection of our rich natural resources, our historical locales, and our community and family values is critical. Future growth and sound economic development must be carefully planned and managed. DHEC works with local governments to develop innovative, cost-effective initiatives that can be used by communities to build the South Carolina of the future.

“Low Impact Development” eases stormwater burden

Poor land use planning has drastically altered the normal flow of stormwater. In the natural environment, a once slow-moving sheet of runoff water—filtered and cleaned of pollutants by plant material and gradually allowed to soak into the soil to replenish groundwater—is now a rapidly moving flow that goes directly into paved ditches and culverts. Because this directed amount of water is moving quickly along impervious streets and ditches, little filtering or soaking occurs. The sediment and pollutants end up in the nearest water body and must be removed at the drinking water treatment plant. There also is an impact from polluted stormwater on fish, aquatic insects and wildlife that depend on rivers and lakes.

Low Impact Development (LID) is a “new-old” approach to stormwater management that mimics the spongelike effects of a natural, undeveloped landscape. LID techniques allow stormwater to stay on-site and soak in instead of rapidly running off-site via pipe, gutter and curb systems. Some LID techniques include specially designed garden areas that receive and filter stormwater, porous paving, maintaining natural drainage courses, and installing vegetated roofs. By carefully designing and locating a number of LID-stormwater management measures throughout a site’s landscape, stormwater runoff can be controlled and natural resources and drinking water supplies protected. In 2003, DHEC’s Bureau of Water and Office of Ocean and Coastal Resource Management (see page 35) held conferences on LID for developers, builders, government officials and the public. LID techniques now are being used in South Carolina. DHEC staff also are promoting LID concepts among city and county managers and encouraging them to amend local ordinances to accommodate LID practices.

► <http://www.scdhec.gov/water/lid>

► **Richelle Tolton:** toltonrd@dhec.sc.gov (803) 898-4213

Anne Marie Johnson: johnsoam@dhec.sc.gov (803) 898-4187



Brownfields given new life

Brownfields are properties where expansion, redevelopment or reuse is hindered because of real or perceived environmental contamination. Many rural South Carolina towns have old, abandoned properties such as textile mills that could be redeveloped into new economic opportunities for their community, but contamination or the perception of contamination makes it difficult to attract a new business.

The Brownfields/Voluntary Cleanup Program provides communities opportunities to spur growth. Using U.S. Environmental Protection Agency (U.S. EPA) funding, DHEC conducts Targeted Brownfields Assessments within the political jurisdictions that need environmental assessment but do not have the staff or funding to do them. Also, DHEC has the Brownfields Cleanup Revolving Loan Fund, a total of \$4.25 million, available to lend for non-time-critical cleanups at brownfield sites across the state. Staff also review technical information, provide oversight, coordinate training, serve on task forces, and assist with public participation for cities and towns that have received additional U.S. EPA brownfield funding. As of June 30, 2003, 44 non-responsible parties had entered into Voluntary Cleanup Contracts (VCCs) with DHEC since 1996, and 36 responsible parties had entered into VCCs. Twenty-eight certificates of completion had been issued to parties who completed the work required under the VCC.

- http://www.scdhec.gov/lwm/html/vcp_info.html
- **Gail Jeter:** jetergr@dhec.sc.gov (803) 896-4069
- **Karen Sprayberry:** spraybkj@dhec.sc.gov (803) 896-4252



The S.C. Aquarium is a brownfields redevelopment site.

Assist Communities in Planning for and Responsibly Managing Growth

Businesses get recycling assistance

Businesses and industries are often overlooked sources of solid waste, but they account for more than 40 percent of the total solid waste generated. The Business Recycling Assistance Program (B-RAP) is a unique partnership that provides technical assistance on waste management issues to businesses, industries, governments, organizations and others. B-RAP offers free, confidential, non-regulatory services including waste reduction and recycling opportunities, research and assistance in developing and locating markets for recyclable materials, updates on recycling legislation and incentives, training and educational seminars, and materials and publications.

In 2003, the program assisted about 500 companies on a variety of waste management issues, helped with workshops in several counties targeting business recycling, was awarded a U.S. EPA grant to set up a mercury lamp recycling program, and developed the S.C. Resource Conservation Challenge.

B-RAP, which began in the fall of 2001, is a partnership including DHEC's Center for Waste Minimization and Office of Solid Waste Reduction and Recycling, the S.C. Department of Commerce Recycling Market Development Advisory Council, and the University of South Carolina Industrial Ecology Program.

- <http://www.scdhec.gov/eqc/lwm/brap>
- **Eric Melaro:** melaroew@dhec.sc.gov (803) 896-4231



Projects address vehicle pollution

Take a Break From the Exhaust

As South Carolina's population grows, more vehicles join the roadways each year. A large contributor to air pollution is the exhaust from cars, buses and trucks.

For the past two years, DHEC's Bureau of Air Quality staff has participated in an alternative commute pilot project called "Take a Break from the Exhaust" (TABFTE). The project's goals are to reduce emissions from mobile sources, such as cars and trucks; increase awareness of the impact of mobile sources on air quality; and encourage DHEC employees to take voluntary actions to help improve air quality. In 2003, the project won the Governor's Pollution Prevention Award for state agencies.

DHEC encourages other state government agencies to implement practices that support a healthier environment. TABFTE encourages employers and employees to telecommute or provide “flex” scheduling to help improve air quality. TABFTE consists of a baseline survey tool administered electronically to all participants before the project starts to determine rideshare partners, total vehicle miles traveled by each employee, and additional data for evaluating the project. TABFTE results have been encouraging. Carpooling increased 34 percent from 2002 to 2003, and bicycling to work increased 10 percent. Additionally, more employees stay in for lunch or walk to lunch during Ozone Action Days. Furthermore, estimated nitrogen oxide reductions from vehicles for staff participating amounted to 12.77 percent. TABFTE project staff are currently working with other areas of DHEC and private industry partners to participate in this project for the 2004 ground-level ozone season.

► **Jack Porter:** porterje@dhec.sc.gov (803) 898-3829

SmartRide

During October 2003, the S.C. Department of Transportation sponsored the SmartRide Research Project to study the feasibility of a commuter mass transit system in the Columbia Metropolitan Area. Two morning routes from the Newberry, Irmo, Lexington and Lugoff areas allowed commuters to use free mass transit to travel into downtown Columbia; likewise, two evening routes carried commuters back out of the city. About 10 locations, convenient to many government offices, were selected as pick-up and drop-off locations. Several benefits were gained from the SmartRide Project. Commuters saved fuel and time, reduced the stress of driving, and had an overall increase in “well-being.” Removing vehicles from peak travel hours and the shift of commuters to mass

transit helped decrease traffic congestion and increase highway safety. Impacts to public health and the environment were also reduced from SmartRide, as fewer harmful pollutants from vehicles were released into the air. SmartRide proved to be a sound option. DHEC is a supporting partner of this initiative and is assisting SCDOT with calculating emissions reductions from this pilot project.

► <http://www.scdhec.gov/baq>

► **Chad Wilbanks:** wilbanmc@dhec.sc.gov (803) 898-7099



Assist Communities in Planning for and Responsibly Managing Growth

Local planning addresses growing pains

Many of South Carolina's challenges concern issues that cross county and state lines and can be solved if local governments work together with state and federal agencies to find common solutions.

Sustainable Environment for Quality of Life (SEQL)

The SEQL project calls upon government, business and community leaders from North and South Carolina to address environmental issues that impact the quality of life and economic viability of the Charlotte-metro area. SEQL invites local leaders to work together on air quality, water quality and sustainable growth issues. The program supports the region's efforts to develop integrated and long-term solutions to ensure economic development and a positive

quality of life for its future. The project area includes 15 counties populated by 2.1 million people and encompasses more than 100 political jurisdictions. SEQL is funded by a U.S. EPA grant and is led by the Centralina Council of Governments and the Catawba Regional Council of Governments with support from DHEC, North Carolina's environmental agency, and the U.S. EPA. Some county measures being addressed are adopting a SEQL/Clean Air Resolution, coordinating with local county councils to build stakeholder groups, and working on ordinances that impact the environment such as tree planting, bike trails and parking with green spaces.

► **Diane Minasian:** manasids@dhec.sc.gov (803) 898-4467

Early Action Compacts

At the end of 2002, 45 of South Carolina's 46 counties, DHEC and U.S. EPA Region 4 had signed compacts to implement ozone reduction strategies earlier than federally required. As a party to the Early Action Compact, each county, along with the state, is committed to protect and improve the **air quality** of their local area before a new federal regulation goes into effect. Local governments, industry, environmental groups and other community groups throughout the state are working together to plan local strategies to prevent ozone pollution. Plans involve mobile source pollution reduction, outreach actions and point source prevention. The individualized plans incorporate flexibility and foster "home-grown" solutions.

In addition, DHEC has formed statewide stakeholder groups involving local and federal governments, industry, environmental groups and other interested parties to implement statewide strategies for reducing the precursors that form ground-level ozone (see page 40).



Local governments were required to finalize plans for emission reduction strategies in March 2004 through local early action plans. These local plans will be incorporated into DHEC's Early Action State Implementation Plan revision and submitted to U.S. EPA. The SIP revision must show that areas in South Carolina designated nonattainment for the new ozone standard will implement emission reduction strategies to return the area to attainment no later than December 2007. By doing so, the area has an opportunity to defer the effective date of the nonattainment designation, and, more important, to get the public health and environmental benefits of cleaner air sooner.

► <http://www.scdhec.gov/baq>

► *Henry Phillips:* phillimh@dhec.sc.gov (803) 898-3260

Action for a cleaner tomorrow curriculum supplements schools

"Action for a cleaner tomorrow: A South Carolina Environmental Curriculum Supplement" ("Action") is an activity-based interdisciplinary curriculum supplement that provides basic environmental education in the classroom. More than 21,000 teachers and educators have been trained on "Action" in free workshops held around the state since the curriculum supplement was introduced in 1993. In addition to being correlated to the state's science standards, Action in 2003 was correlated to the state's language arts, social studies and mathematics standards and the lessons, glossary and resource section updated.

► <http://www.scdhec.gov/eqc/lwm/recycle/html/action.html>



Assist Communities in Planning for and Responsibly Managing Growth

Environmental Community Health responds to citizen concerns

DHEC's Office of Environmental Community Health (OECH, formerly Health Hazard Evaluation) changed its name in 2003 to reflect its role in working with communities. OECH evaluates community concerns about exposures to toxic substances, responds to environmental issues, and recommends ways to protect public health. Staff consult on health and develop toxicological profiles, provide health education on the effects of toxic exposures, respond to community concerns about harmful health effects of toxic exposures, get involved with the community and help communicate risk, manage the Adult Occupational Lead Program, and create fish consumption advisories.

The OECH also helps EQC staff communicate with citizens in public meetings and hearings. Staff direct public meetings and help mediate between leaders. The OECH plans and carries out DHEC's response to concerns a person or community may have about environmental health risks.

► (888) 849-7241 (Toll-Free Community Line)

► *Nancy Whittle:* whittlnc@dhec.sc.gov (803) 896-8967

Circuit Riders assist with cities' environmental concerns

In October 2001, DHEC received one-year funding from U.S. EPA to create a pilot program known as the S.C. Environmental Circuit Rider program. The pilot program reached 46 small cities and towns with offers for assistance in regulatory compliance. The initial project began in the Pee Dee with a representative from the Pee Dee EQC District and a representative from EQC's Center for Waste Minimization contacting every small municipality within



the Pee Dee region to offer compliance assistance. Written survey responses completed by the municipalities were overwhelmingly positive. Because of the program's success, the U.S. EPA authorized additional funds for expansion to the Greenwood area. The state's regulations are complex and often daunting to small businesses and governments. With this type of assistance, DHEC can help protect public health and South Carolina's environment by preventing pollution and reducing wastes.

► *Robert Jackson:* (864) 223-0333

Bob Burgess: (803) 896-8986

Jerry Baxley: (843) 661-4825

Ongoing challenges, new approaches

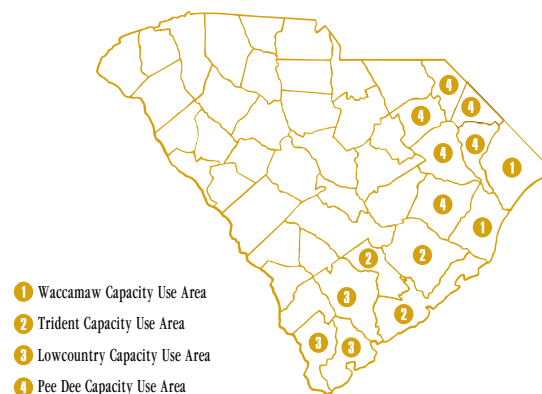
Development draining groundwater resources

Groundwater is a precious, limited resource that needs protection. Investigations in the Pee Dee area (Florence, Darlington, Marlboro, Dillon, Williamsburg and Marion counties) have shown progressive groundwater level declines and an increasing demand on the groundwater resource as a result of continuing growth. Before development, the groundwater level in the Middendorf aquifer measured in Florence was 110 feet above sea level. When measured in 2001, the groundwater level was 85 feet below sea level, a total decline of 195 feet. Groundwater levels in the Black Creek aquifer around the town of Andrews were approximately 55 feet above sea level before development. By 1995, they had declined to 198 feet below sea level, a decline of 253 feet. The most recent measurement in 2001 showed this level had recovered to 154 feet below sea level, but this is still a significant decline.

Groundwater conditions in the Pee Dee region were recently investigated to determine if designation as a **Capacity Use Area** is warranted. In a Capacity Use Area, anyone who withdraws 3 million gallons of water or more in any one month must have a permit from DHEC and report the amounts withdrawn so that water use can be tracked. Groundwater supplies of the Pee Dee region have been used to the degree that coordination and regulation of groundwater supplies are necessary to protect the supply.

► <http://www.scdhec.gov/water/html/capuse.html>

Areas Where Groundwater Withdrawal is Regulated



Data Source: SC DHEC Bureau of Water

Additional resources:

U.S. EPA Residential Water Conservation Techniques

► <http://www.epa.gov/seahome/watcon.html>

U.S. EPA Brownfields Cleanup and Redevelopment

► <http://www.epa.gov/swerosps/bf/index.html>

Chapter 5

Protect and Enhance Coastal Resources; Ensure Proper Management and Access for the Benefit of Current and Future Generations

Many people associate South Carolina with its coast. In addition to pristine ecosystems and native species, much of the state's economy has some connection to its coastal resources. Millions of tourists visit the coast annually, and the state's eight coastal counties are experiencing rampant development. With that development comes a responsibility to ensure access to our coastal resources while protecting and maintaining them for future generations.

Council on Coastal Futures sets priorities

The Council on Coastal Futures is a 19-member advisory committee to the DHEC board whose mission is to document priority issues and concerns relating to coastal zone management and recommend actions, programs and measures to improve the effectiveness of the S.C. Coastal Zone Management Program. Numerous stakeholder groups nominated representatives to serve on the council. Appointees then were selected based on a goal of creating a balanced and diverse group of individuals that represented a broad spectrum of constituents with interests in coastal issues. The council first met in December 2002 and will continue to meet monthly until March 2004, with a final report due to the DHEC board by May 2004.

Coastal issues and concerns were prioritized through interviews with former DHEC Ocean and Coastal Resource Management staff and board members, a survey of members of stakeholder groups, and interviews with the general public. Council took the input from those assessments and established three priorities:

- permit processing issues;
- local government assistance, particularly in the areas of stormwater management and growth/development issues; and
- resource management issues (isolated wetlands, beach management, etc.).

The public, stakeholders and experts have been invited to speak to the council and provide recommendations for the council to consider. Currently, the council is finalizing discussions of issues to be included in its report. Some issues addressed so far include intra-DHEC coordination to improve the permitting process and shorten review time; providing assistance to local governments on stormwater



best management practices, beachfront issues, and wetland management; public beach access and beach renourishment funding; and a long-term vision for the coast.

Local governments provided management tools through Special Area Management Plans (SAMPs)

DHEC's Ocean and Coastal Resource Management has worked on several Special Area Management Plans (SAMPs), which are joint undertakings with local governments and state agencies to coordinate long-term water quality objectives for drainage subbasins.

Beaufort SAMP provides water quality guidance

Initiated at the request of a citizens group that had become alarmed at shellfish bed closures in the county, the Beaufort County SAMP was a cooperative undertaking between DHEC and the county that was funded by the National Oceanic and Atmospheric Administration. There were 10 work elements of the SAMP, which fell under five headings: stormwater management, wastewater management, water quality monitoring, boating management, and public education. The SAMP funded the establishment of a stormwater utility, a watershed-level stormwater management plan for the Okatie Basin, the development of treatment standards for bridge and road runoff, and a water quality monitoring report. In addition, the SAMP developed a boating management plan and a comprehensive on-site disposal system (septic tank) program and conducted an educational campaign to inform the public



Protect and Enhance Coastal Resources; Ensure Proper Management and Access for the Benefit of Current and Future Generations

of the importance of land use activities and water quality. If adopted by Beaufort County Council and approved by the DHEC board, this document will provide guidance on a number of issues that will affect water quality in the county.

Georgetown SAMP seeks safe development

In May 1987, the City of Georgetown and the then-S.C. Coastal Council completed work on a SAMP for the waterfront district between Orange and Screven streets. The purpose was to propose land development patterns and construction policies that could be used in future years to guarantee that the Georgetown downtown

waterfront area develops in an environmentally sensitive way. In addition, the SAMP had several objectives, including making the waterfront accessible to encourage the redevelopment of private properties and assuring that private and public undertakings are done in a manner that will protect both the natural and human environments.

Since 1987, many structures have been built in accordance with the SAMP, and the downtown streetscape has undergone a complete redesign. Because of the positive results from the original SAMP, the city worked with DHEC to expand the boundaries of the area covered by the SAMP.



Berkeley County SAMP ensures protection

The development of a SAMP in Berkeley County, the Upper Cooper River Corridor Plan, presents an opportunity to implement 13 recommendations from the earlier Charleston Harbor Project (CHP) SAMP, which focused on three primary issues: cultural resource management, water management, and land and habitat management. The Cooper River Corridor in Berkeley County is a uniquely important area from historical, natural resource and economic perspectives. The need to balance the multiple uses of this area and limit potential conflict is very important to Berkeley County officials, local landowners and other stakeholders in the area. Recommendations in the CHP SAMP were developed to ensure that the multiple uses of the area be protected and maintained. Through the efforts of participants in the Berkeley County Upper Cooper River Corridor Plan, it will be possible to protect several federally endangered species as well as several historically important properties. This project is a good example of federal, state and local governments working together to plan for the future growth of an area while protecting valuable resources.



Ongoing challenges, new approaches

Workshops promote low impact coastal development

In October 2003, DHEC partnered with the S.C. Department of Natural Resources to host a conference, Low Impact Development and Stormwater Management, An Integrated Design Approach, geared toward coastal developers. (A separate conference was held in the Midlands; see page 24.) Participants learned about the advantages of using low impact development measures for handling stormwater as opposed to traditional methods. These measures include on-lot bioretention, narrow streets to reduce imperviousness, and vegetated buffers. They serve to preserve environmental quality and reduce costs in development and infrastructure construction and maintenance. Developers and government officials can now use the supplied information about low impact development for future projects and stormwater ordinances.

Chapter 6

Protect, Continually Improve and Restore the Environment

The protection of our environment is a core responsibility of DHEC. Ensuring that the impacts of our activities on the cleanliness of our air, the health of our waters, and the sustainable use of the land do not affect the health of our citizens has required regulation of the use of these resources. Violations of environmental standards not only degrade the environment, but can also result in increased risks associated with acute and chronic diseases. Environmental quality standards have been set to protect the most sensitive individuals and ecosystems. Protection of our citizens' health is essential, but allowing the degradation of our environment affects our quality of life, the perceptions of our communities, and can impact existing and future economic development. As we have met and gone beyond what is necessary to protect health, continued population growth, industry expansion and land use changes make it more important to understand the impacts and interrelations of many more dispersed contributions to pollution.

Watersheds define area of water body impacts

Watersheds are the land areas that deliver water, sediment and dissolved substances to a stream, lake or estuary. DHEC works to protect, restore and improve water quality by focusing our regulatory, monitoring and planning efforts on watersheds. All movement of water and physical, chemical and biological processes – including our activities within a watershed – affect the quantity and quality of water. Watersheds are significant because the water quality at any point in the system impacts the quality everywhere downstream.

Section 303(d) of the federal Clean Water Act requires South Carolina to compile a list every two years of the waters not meeting water quality standards. Portions of streams, rivers, lakes and other waterways are placed on this 303(d) list (or list of impaired waters) when five years of monitoring data indicate that state water quality standards are not being met.

► <http://www.scdhec.gov/eqc/water/pubs/303d2002.pdf>



S.C. Watersheds



Data Source: SC DHEC Bureau of Water

Waters may be listed as impaired for a variety of reasons, often the result of local and upstream land use. The impact of runoff from developed areas or agricultural uses can be significant. Water quality is checked for criteria such as dissolved oxygen, pH, potentially toxic pollutants, and bacteria. DHEC must develop a **Total Maximum Daily Load (TMDL)** for each lake, river or stream on the list. A TMDL is a calculation of the maximum amount of a pollutant that a water body can receive from all sources and still remain healthy and meet water quality standards. The Citizen's Guide to Clean Water is a good resource for those interested in the protection of their watershed.

► <http://www.scdhec.gov/water/pubs/citgd.pdf>

Grants are available through DHEC for improvement projects. Contact a watershed manager for additional information.

► <http://www.scdhec.gov/water/shed/contact.html>

Isolated wetlands need protection

Wetlands are the most productive ecosystem on the North American continent. Freshwater wetlands are flooded or saturated by water from rain, surface runoff, stream flooding or seepage from groundwater. They help store water and reduce flooding and slowly release the water they hold, moderating flow and recharging nearby aquifers and underground streams. Wetlands also help purify water by processing nutrients, suspended materials, and other pollutants. They provide food and shelter to countless types of fish, birds, reptiles and mammals. Many endangered species depend directly or indirectly on the presence of healthy wetlands.

Isolated wetlands, those not connected to rivers or streams, are found throughout the state, but are most numerous in the

central and lower areas of South Carolina. These rich areas include swamps, mountain bogs, sinkholes and our unique Carolina Bays. Isolated wetlands comprise at least 10 percent of the state's approximately 4 million acres of wetlands.

DHEC has historically regulated activities that altered wetlands in South Carolina through the Bureau of Water's Section 401 water quality certification and the Office of Ocean and Coastal Resource Management's coastal zone consistency certifications. A 2001 U.S. Supreme Court decision removed DHEC's opportunity to review activities in thousands of acres of isolated wetlands, making them vulnerable to development and destruction. DHEC has proposed a regulation to the General Assembly that would provide a permitting program to control and permit activities involving isolated wetlands.

State has rare opportunity to review power plant impacts

The Federal Energy Regulatory Commission issues licenses to operate hydroelectric projects for periods of 30 to 50 years. There are four major dam relicensing efforts currently under way involving or affecting South Carolina rivers. These are: the SCE&G facility on the Lower Saluda River, the Santee Cooper facilities on the Cooper and Santee rivers, the Duke Power facilities on the Catawba River, and the Progress Energy and Alcoa facilities on the Yadkin-Pee Dee River that flows into South Carolina from North Carolina. DHEC must certify that these facilities will not violate effluent limits and water quality standards. The license renewals are rare opportunities for DHEC to apply the latest data and employ the latest understanding of these river systems to ensure impacts on water quality are minimal.



Protect, Continually Improve and Restore the Environment

Air quality a regional issue

Airflow through our state is not confined by well-defined boundaries. Local topography may affect a small area, but air quality at any point impacts the quality everywhere downwind. The control or elimination of local pollution sources, both from specific points like stacks and vents and from more numerous and dispersed sources like automobiles, can have the greatest local impact, but the contribution from activities “upstream” still can have an impact.

South Carolina has met all the ambient air quality standards for many years, and decreasing concentrations of lead, carbon monoxide, sulfur dioxide and nitrogen dioxide have mirrored the national trend. Concentrations of two pollutants, **ozone** and **fine particulate**, remain high enough to occasionally be a health concern.

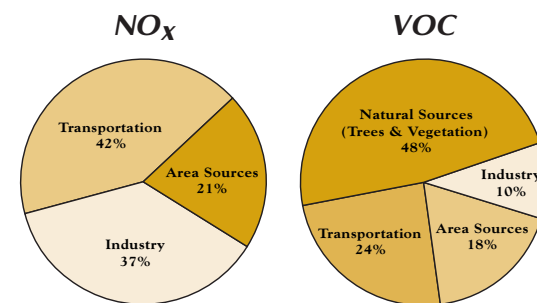
On days forecast to have higher ozone concentrations, you can help reduce air pollution by:

- Driving less
- Carpooling
- Shopping by phone, mail or the Internet
- Riding public transit where available
- Combining your errands into one trip, “trip-chain”
- Telecommuting

Ground-level ozone and its precursors

Ground-level ozone is formed when two classes of chemicals, nitrogen oxides (NO_x) and volatile organic compounds (VOCs), react in the presence of heat and sunlight. The largest source of NO_x is the burning of fossil fuels. Our largest sources of VOCs are natural, but vapors from paints, glues and evaporating solvents contribute to the mix. The areas that contribute the most ozone precursors (the NO_x and VOCs) and have the greatest impact to downwind ozone concentrations are the more densely populated urban areas with high levels of automobile traffic. Ground-level ozone typically approaches unhealthy concentrations only during the hot, summer months. Stagnant weather conditions keep pollutants close to the ground and prevent them from dispersing. Conditions that contribute to ozone formation also can increase concentrations of fine particulate.

Ozone Precursor Sources



Data Source: SC DHEC Bureau of Air Quality

Area sources are those that do not require permits

8-hour ground-level ozone boundaries

National ambient air standards are set by the U.S. EPA to protect public health. In 1997, the U.S. EPA revised the national standard for ground-level ozone from a one-hour “peak” standard to an eight-hour “average” standard. This revised standard is commonly referred to as the 8-hour ozone standard. The more protective 8-hour standard is not being consistently met in the Greenville-Spartanburg-Anderson area and around Columbia.

In April 2004, the U.S. EPA designated three areas in South Carolina that do not meet, or “attain” the 8-hour ozone standard. A “nonattainment” designation requires specific air pollution control strategies to be put in place, dependent on the magnitude of the average high ozone concentrations above the standard.



Ground-level ozone forecasts protect sensitive groups

The most direct and effective measure that individuals with chronic respiratory and cardiovascular disease can take to protect themselves during those days when pollution concentrations may be a problem is to know when to reduce outside activity or stay inside. From May to September, when ozone levels can be a concern, a team of DHEC Bureau of Air Quality meteorologists reviews weather patterns, forecasts and pollutant concentrations to develop daily forecasts of the next day's ozone concentration and an Air Quality Index (AQI) for four regions of the state. Each afternoon, the meteorologists determine the projected concentrations for the next day and correlate that projection to the appropriate AQI color code. The Green, or “good,” category (AQI 0 to 50) is the best air quality, followed by the Yellow, or “moderate” (AQI 51 to 100). **Ozone Action Days** are announced when Code Orange, or “unhealthy for sensitive groups,” is predicted (AQI 101-150). An Ozone Action Day would also be declared if a Code Red, or “unhealthy” (AQI 151 to 200 or above), is predicted. The forecast is made available to media, individuals and organizations and is posted on the DHEC Web site.

► <http://www.scdhec.gov/eqc/baq/ozone/baqspare.asp>



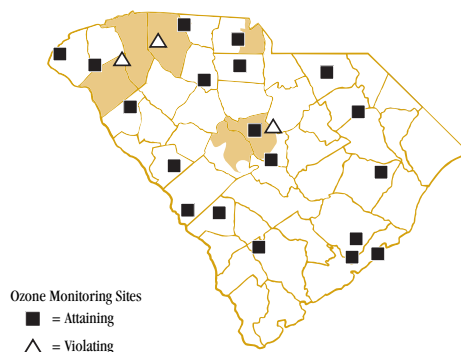
Protect, Continually Improve and Restore the Environment

In December 2002, 45 of South Carolina's 46 counties joined with DHEC in a statewide ozone early action initiative to attain compliance with the 8-hour standard no later than December 2007. By participating in the **Early Action Compacts**, local areas can achieve cleaner air sooner and can design air pollution control strategies that are most appropriate for their areas. The designation for the Columbia area (parts of Richland and Lexington counties) and Anderson, Greenville and Spartanburg counties will be deferred as long as the areas continue to demonstrate progress through their Early Action Plans.

EPA also designated a portion of York County as nonattainment, even though the monitors in and around York County show that the air quality meets the ozone standard. The eastern portion of York County has been designated as a part of the Charlotte area and received that area's moderate classification. This portion of York County is no longer eligible to participate in the early action process.

► <http://www.scdhec.gov/eqc/baq/html/eap.html>

Areas Designated as "Nonattainment"



Data Source: SC DHEC Bureau of Air Quality

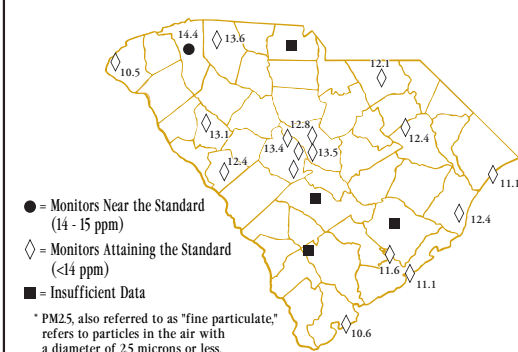
PM 2.5 designations expected this year

The designation of areas not meeting the **fine particulate** standard is also expected in 2004. DHEC has made boundary recommendations, with final determinations expected in December. Based on the latest three years of data, all areas, both urban and rural, are meeting the national particulate standards. As with 8-hour ozone concentrations, the inland and urban areas tend to have the higher concentrations. Columbia and the Greenville-Spartanburg area have had concentrations close enough to the standard to merit additional attention.

DHEC also is working with 10 Southeastern states to reduce the impacts of fine particulate on Class I areas, those areas identified by Congress to be protected from visibility impairment. The VISTAS (Visibility Improvement State and Tribal Association of the Southeast) effort is directed at reducing and improving visibility in these areas.

► <http://www.vistas-sesarm.org/>

Average PM 2.5* Concentrations 2001-2003



Data Source: SC DHEC Bureau of Air Quality

Ongoing challenges, new approaches

Petroleum brownfields targeted for cleanup

Human impact on land is not always as obvious as an open dump or abandoned mine. Automobile use has had an unseen impact below the surface, the result of failing buried gasoline storage tanks. Leaks from the tanks or from the pipes, pumps and dispensers that are attached to them have contaminated soils and groundwater across the state. DHEC's Underground Storage Tank (UST) Program ensures that contamination is located and cleaned up and the remaining tanks operated to reduce the chances of more leaks. The program also has increased efforts to identify and resolve environmental issues that hinder site redevelopment at abandoned gas stations and commercial sites. DHEC has asked local governments along with service and community organizations to help identify such sites in their neighborhoods. The UST Program then will assist in forming partnerships and coalitions to resolve the challenges involved in redeveloping these properties. The UST Program is administering two U.S. EPA grants for Petroleum Brownfields Projects in the cities of Anderson and Greenville.

► *Mark Berenbrok:* (803) 896-6848

► <http://www.scdhec.gov/ust/>

Additional resources:

U.S. Environmental Protection Agency

► <http://www.epa.gov>

Federal Energy Regulatory Commission

► <http://www.ferc.gov>

Association of State Wetlands Managers

► <http://www.aswm.org/fwp/swancc>



Chapter 7

Increase the Quality and Years of Healthy Life for Seniors

Sunflower

As the state's population ages, all South Carolinians have an important part to play to help older adults remain healthy, functionally independent, and living in the community. The gain of 30 years – to 77 – of life expectancy in the United States during the 20th century was a triumph for public health. The success of public health initiatives in areas such as infectious disease control, immunizations and chronic disease prevention has resulted in longer, healthier lives for many Americans. A new challenge for public health is to focus on healthy aging to assure that older adults maintain optimal health status and quality of life in later years.

Preventive health key to healthy senior population

Poor health is not an inevitable consequence of aging. By taking preventive steps, more South Carolinians in their 70s, 80s and 90s enjoy independent, active living with minimal health problems. Many older adults, however, still suffer unnecessarily from chronic and infectious diseases, injuries and functional limitations that are avoidable or can be delayed. Scientifically proven measures such as increased physical activity can improve health, reduce the impact of disease, and delay disability and the need for long-term care. Public health professionals and citizens alike should continue promoting and adopting preventive steps so that more South Carolinians can enjoy healthy aging.

Senior population growing

By 2015, South Carolina's mature adult population is expected to make up one-third of the state's residents. Mature adults outpaced other age groups with a 33 percent growth rate between 1990 and 2000. In 2000, South Carolina boasted 485,300 residents 65 and older. The mature adult population has increased by approximately 100,000 each decade from 1950 to 1990 and by 90,900 from 1990 to 2000, representing an overall increase of 322 percent. An astonishing growth in the numbers of South Carolina residents over 85 parallels the national trend. In 1950, their numbers totaled 4,193. By 2000, there were 50,269, or 12 times the number in 1950. By the year 2025, estimates are that the number of people over 85 will reach 98,609, representing a 96 percent increase from 2000.

Poor health among seniors costly

Preventive steps are important measures because the growing population of older adults places increased demands on the health care system. Seniors are the most frequent users of



health care services in our state. Growth in the population of seniors needing long-term care and health care, the diminishing capacity of family members to provide long-term care, changes in medical technology, and rising health care costs have resulted in increasing obligations for federal and state governments as well as for families.

The cost of health care in institutions can be staggering. One year in a nursing home can cost from \$35,000 to \$45,000. Medicaid bears the major portion of these expenses. With the state's economy, future reimbursement costs for nursing homes will be a challenge. Scientifically proven measures such as increased physical activity can improve health, reduce the impact of disease, and delay disability and the need for long-term care.

Arthritis: a burden for seniors

Arthritis and other rheumatic conditions remain among the most common chronic conditions and the leading cause of disability in the United States. Twenty-eight percent of South Carolina adults have doctor-diagnosed arthritis. While arthritis is not limited to seniors, the prevalence increases with age. Nearly 60 percent of South Carolina adults with arthritis are 65 or older.

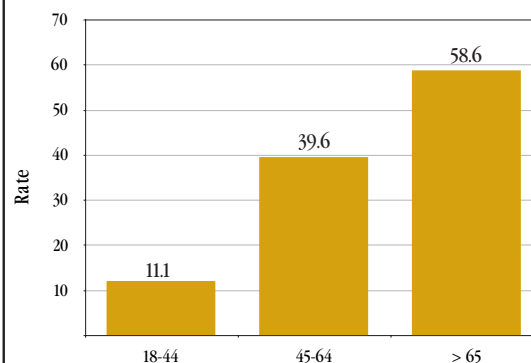
Some forms of arthritis can be prevented. For example, weight control and injury prevention lower the risk for developing osteoarthritis. Physical activity can lower the risk of getting arthritis as well as improve the quality of life for those who have arthritis.

For any form of arthritis, early diagnosis and appropriate management can reduce symptoms, lessen disability, and improve quality of life.

► <http://www.scdhec.gov/arthritis/>

► S.C. Arthritis Prevention and Control Program
(803) 898-0760

**Prevalence of Arthritis in S.C. by Age,
2002 BRFS**



Data Source: SC DHEC BRFS



Increase the Quality and Years of Healthy Life for Seniors

Prevent and decrease overweight and obesity

Eating and drinking too many calories and not getting enough exercise can cause excess weight and obesity. Unhealthy eating habits such as high-fat diets and low intake of fruits and vegetables, along with sedentary lifestyles, account for about 300,000 deaths each year in the United States. Obesity and being overweight are associated with an increased risk for coronary heart disease, type 2 diabetes, stroke, gallbladder disease, osteoarthritis, sleep apnea, breathing problems, and certain cancers (see page 14).

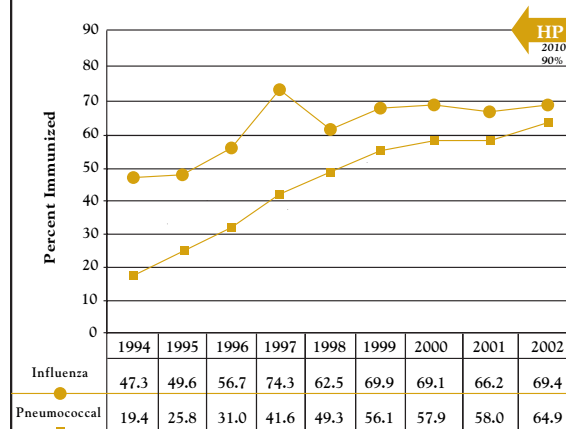


Influenza (the flu) and pneumonia take toll on seniors

Influenza (the flu) and pneumonia combined are the eighth leading cause of death in South Carolina, claiming 792 residents age 65 and older in 2002. Nationally, about 20,000 deaths a year are attributed to flu. Ninety percent of deaths from the flu occur among people ages 65 and older. Medicare costs for influenza-related hospitalizations in the United States can reach \$1 billion each year. A one-time dose of pneumonia vaccine and annual flu shots are the primary methods for preventing these diseases and their severe complications. (For coverage levels by race, see page 12. For U.S. comparison, see page 64.)

➔ <http://www.scdhec.gov/hs/diseasecont/immunization>

Persons Ages 65+ Who Received an Influenza Vaccine in the Past Year or a Pneumonia Vaccine Ever



Data Source: SC DHEC BRFSS

Cardiovascular disease, diabetes can be prevented

Cardiovascular disease and diabetes are serious chronic diseases in South Carolina (see heart disease and stroke data on pages 9, 55 and 56). Both are more prevalent among older South Carolinians and among African-Americans. Both can be prevented or delayed by following simple guidelines, but translating these guidelines into action and behavioral changes has proven to be very complex. For example, just a small weight loss of 7 percent can prevent or delay diabetes in persons at highest risk for the disease.

► http://www.scdhec.gov/HS/comhlth/cvh/cvh_program.htm

Breast cancer high among seniors

Among South Carolina seniors, the breast cancer death rate for women age 65 and older is nearly 7.8 times (780 percent) higher than the rate for women under the age of 65 (see data, page 54). The death rate for African-American women age 65 and older in the state is substantially higher than for white women of the same age. Early detection is the best prevention, and this includes the clinical breast exam, mammogram and the self-breast exam. Stopping smoking, a good diet high in fiber, low in fat, and including many vegetables, and also regular exercise are helpful in preventing breast cancer. Control of obesity is also recommended because cancer is harder to detect in dense or fat tissues.

► <http://www.scdhec.gov/HS/comhlth/Cancer/links.htm>



Involving senior citizens in environmental stewardship

Seniors over the age of 50 can become involved in a variety of environmental improvement projects aimed at educating citizens and taking positive steps to improve environmental quality through the Senior Environmental Corps. DHEC and the Upper Savannah Council of Governments formed the corps for the Upper Savannah region of South Carolina in consultation with the Environmental Alliance for Senior Involvement. An additional partner is the Lander University students' environmental studies organization. For more information, contact Robert Jackson at the DHEC Upper Savannah EQC District Office at (864) 223-0333 or Blake Lanford at the Upper Savannah Council of Governments at (864) 941-8075.



Increase the Quality and Years of Healthy Life for Seniors

Ongoing challenges, new approaches

Healthy communities lead to healthy aging

Communities can assist in healthy aging by making environments safe, more activity-based, and accessible to seniors. Planning should include creating communities with bike paths, sidewalks and neighborhood grocery stores. Safer communities and mass transportation are central issues for our aging population because they provide basic access to services that younger South Carolinians take for granted. (For more on healthy communities, see page 2.)



Communities can assist their aging population by assuring that supports and services are available to promote healthy behaviors and health improvements. Senior citizens should be involved in any efforts to conduct community planning that promotes increasing activity levels and independence for older residents. Social supports, such as volunteer opportunities, also provide a way for seniors to contribute to their communities while others gain from their knowledge and experience. Successful initiatives could focus on enabling senior residents to age in place while maintaining the quality and years of their lives.

Safe, senior-focused housing is needed and can be encouraged by working with developers to assure larger door openings allowing wheelchair accessibility in homes and showers. Adaptations are easily made for door handles, and ramps allow quick movement in the event of a fire or health emergency.

Personal responsibility for health necessary

To make a difference in quality of life now and in later years, it is important to take personal responsibility for health:

- Know where to seek and receive support services. Families provide 80 percent of all long-term care services. Volunteer your time and talents to support these family caregivers.
- Help seniors manage their medical needs and medicines. Conduct a safety audit in their homes to assure no hidden dangers could cause injuries. Provide transportation to seniors. Volunteer for community services aimed at seniors, such as Meals on Wheels.

- If you are a senior, seek medical screenings for chronic diseases—get your blood pressure checked and get screened for diabetes. If you are a woman, learn to do breast self-exams and get a regular Pap smear. Men over 50 need annual prostate exams and blood tests.
- Stay physically and mentally active. Physical activity and nutrition are our most important allies in the fight against chronic disease.
- Get a flu shot every year in October.
- Ask your doctor or public health nurse about your need for a pneumonia shot.

Institutional alternatives are desired

DHEC's **Health Regulations** section monitors the health and safety at adult day cares, nursing homes and community residential care facilities.

More than 40 nursing homes in South Carolina are implementing the **Eden Alternative** or other quality initiatives with similar values and principles. Many facilities that have implemented the Eden model have had decreased staff turnover rates, decreased use of medication, and decreased infection rates.

As South Carolina's aging population continues to increase and consequently the need for long-term care services increases, innovative models of care to help keep seniors in their homes and communities are needed. One such model is **PACE (Program of All-Inclusive Care for the Elderly)**. PACE takes many familiar elements of the traditional health care system and reorganizes them in a way that makes sense to families, health care providers and the government programs and others that pay for care.

Additional resources

S.C. Department of Health and Human Services
Bureau of Senior Services

▶ (803) 898-2850

▶ <http://www.dhhs.state.sc.us/InsideDHHS/Bureaus/BureauofSeniorServices/default.htm>

Eden Alternative

▶ <http://www.edenalt.com>

The National Council on Aging

▶ <http://www.ncoa.org>

AARP

▶ <http://www.aarp.org>



Chapter 8

Improve Organizational Capacity and Quality

Cactus Flower

An essential function of public health is to assure a competent work force for public health and environmental protection and management. DHEC employs a variety of professional staff to perform public health functions, including physicians, nurses, engineers, nutritionists, health educators, environmental health specialists and others. Prevention of disease and enforcement of regulations to protect public health require a competent, experienced work force. Training and retention of staff is a key issue for DHEC. Competition with the private sector puts the agency at a disadvantage in recruiting for high-demand, hard-to-fill positions for which current salary levels are well below the private sector, other Southeastern states, and other state agencies. Funding limitations and unfilled vacant positions also put staff in the position of taking on additional duties with no associated pay increase. Because of fiscal constraints, DHEC operated in 2003 with about 900 fewer employees, including a 30 percent vacancy rate among nurses. DHEC continues to seek improvements in work force competence through training and development of position competencies and career paths.



Training launched for public health managers

Because of retirement options available to state employees, DHEC expects to lose some 350 staff members, many of them management, in the next few years. In anticipation, DHEC's Environmental Quality Control launched a "**Capacity Building**" pilot program designed to develop leaders and prepare for the pending departure of retiring employees. Fourteen managers were trained in February 2003 to become "career coaches" to employees interested in future growth and promotional opportunities. By the end of 2003, 93 employees had begun participation in the project. The state Budget and Control Board's Office of Human Resources recognized EQC for the successful pilot with the first Excellence in Human Resources award. Building on the pilot's success, the Office of Quality Management and the Office of Personnel Services plan to extend this program to all areas in the agency.

Leadership/management opportunities enhanced

DHEC supports staff participation in the Management Academy of Public Health (MAPH) and the Southeast Public Health Leadership Institute (SEPHLI). Both, based at the University of North Carolina School of Public Health, offer opportunities for staff to strengthen management and leadership skills. In 2003, DHEC sent 37 staff to the MAPH and will have eight staff in the SEPHLI. More than 240 DHEC staff members have participated in these unique learning experiences since 1998.

► <http://www.maph.unc.edu/>

► <http://www.sph.unc.edu/sephli/>

Mentoring program

DHEC's Office of Personnel Services provides opportunities to employees who want to be exposed to new work experiences and develop new competencies through mentoring programs. Eighteen people participated in the initial mentoring group, and 46 people have requested to be a part of the current program.

Video conferencing capabilities

DHEC has expanded and enhanced its **video conferencing** capacity to 17 sites and expanded its satellite sites from 39 to 64 sites to include every county in the state, all DHEC district offices and central office. Over the past year, staff has taken advantage of video conferencing and training provided by research and teaching institutions as well as the Centers for Disease Control and Prevention. The agency broadcast abilities now also allow staff to view training and information sessions with expert staff without having to travel to a centralized location.



Ongoing challenges, new approaches

Innovation teams reviewing agency practices

DHEC continually looks for ways to make the best use of its resources. The agency is developing Innovation Teams to look at three specific areas: administration, regulatory and grants. Teams designated throughout the agency will research, assess, evaluate and implement best practices that have worked in other agencies and that would work for South Carolina. The goal is to work smarter, not harder.

Distance learning

Once the agency's Wide Area Network (WAN) is capable of handling increased loads, distance learning over the WAN can be provided, reducing travel and personnel costs.

Additional resources

Capacity Building Project

► (803) 896-8940

Appendix A

South Carolina Data

Collecting and analyzing data on health indicators allows South Carolina to detect trends, such as a rise in the numbers of disease or death occurring in a community that should be addressed through programs or interventions. Likewise, if a trend analysis shows improvement, it helps us determine what is working. Appendix A: South Carolina Data continues the graphic presentation of trends that DHEC has been presenting in its annual reports since 1997. The data is presented by six age groups: pregnant women and infants; children birth to 14; teens; young adults ages 20-44; adults 45-64; and mature adults 65 and older. The health indicators presented are the leading causes of death or hospitalization in each age group or are other public health issues of emerging concern.

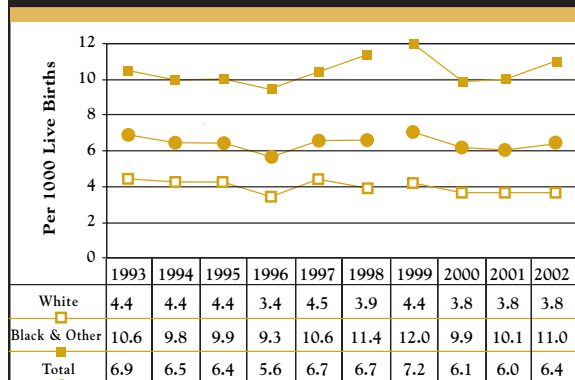
*In the following charts, data for the years 1999 and later use ICD-10, a disease classification system that promotes international comparability in mortality statistics. Periodic revisions reflect advances in medical science. ICD-10 is generally similar to ICD-9, but accounts for some changes observed in mortality statistics. For more information about the ICD-10: <http://www.cdc.gov/nchs/icd9.htm> or the National Center for Health Statistics (NCHS) Web site at <http://www.cdc.gov/nchs/>.

► Bureau of Epidemiology (803) 545-4920

► http://www.scdhec.gov/hs/epidata/state_reports.htm



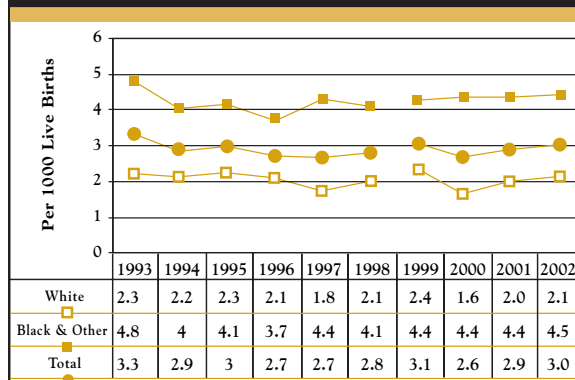
Neonatal* Death Rates By Race



*Neonatal deaths occur within the first 28 days of life.
Data Source: Vital Statistics, SC DHEC
Years 1999+ used ICD-10

HP2010=2.9

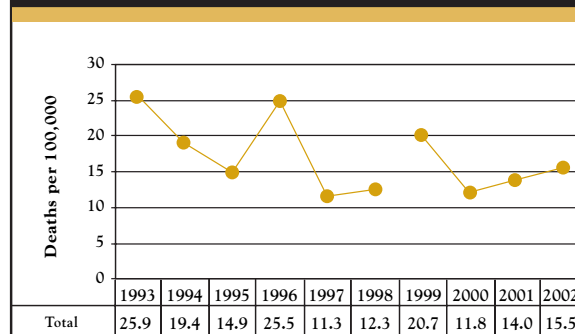
Postneonatal* Death Rates By Race



*Postneonatal deaths occur from 28 days to 1 year of life
Data Source: Vital Statistics, SC DHEC
Years 1999+ used ICD-10

HP2010=1.5

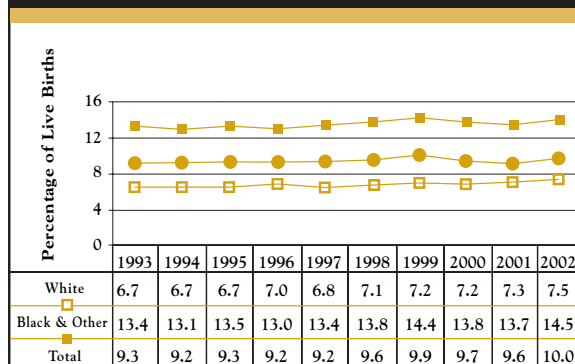
Child Accidents Death Rates Ages 1-4



Data Source: Vital Statistics, SC DHEC

Years 1999+ used ICD-10

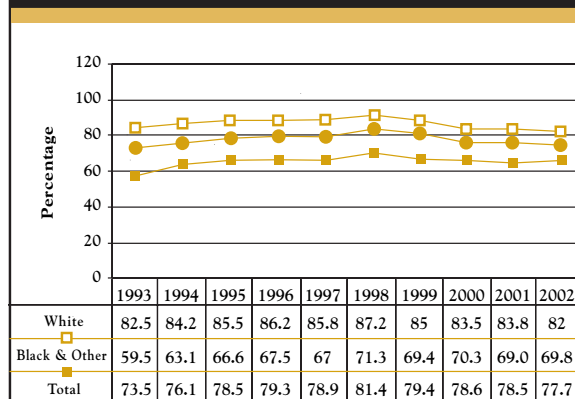
Percentage of Low Birth Weight Infants (<2500 grams) By Race



Data Source: Vital Statistics, SC DHEC

HP2010=5.0

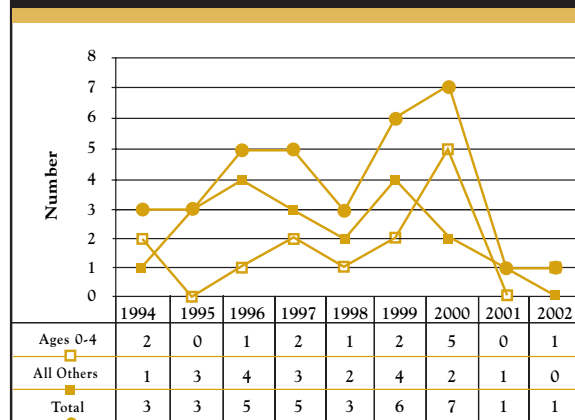
Percent Women Receiving Prenatal Care During First Trimester by Race



Data Source: Vital Statistics, SC DHEC

HP2010=90%

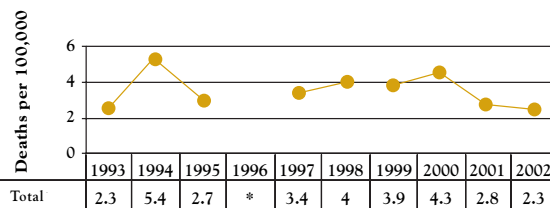
Influenzae B (Invasive Infection) Cases



Data Source: SC Reportable Disease Surveillance System, SC DHEC

South Carolina Data

Child Homicide Rates Ages 1-4

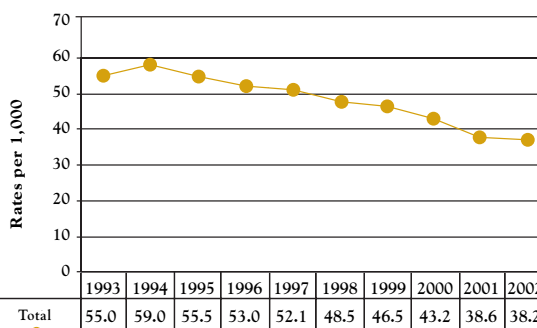


* < 5 deaths

Data Source: Vital Statistics, SC DHEC

Years 1999+ used ICD-10

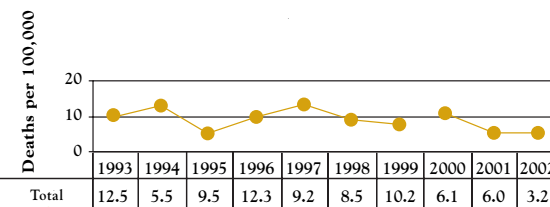
Teenage Pregnancy Rates Ages 15-17



Data Source: Vital Statistics, SC DHEC

HP2010=43

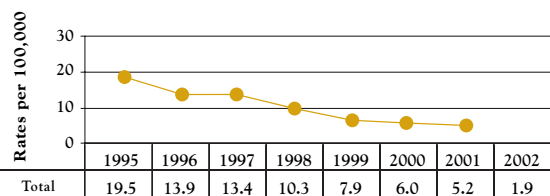
Teenage Suicide Rates Ages 15-19



Data Source: Vital Statistics, SC DHEC

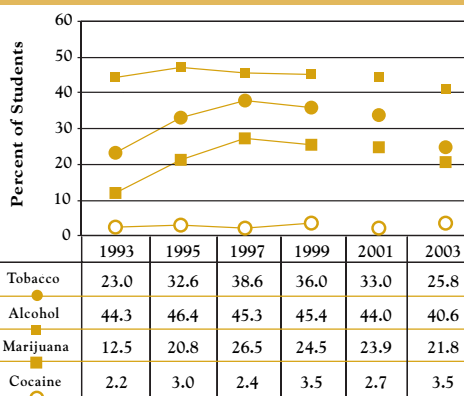
Years 1999+ used ICD-10

Children Hospitalized for Chickenpox Ages 0-4



Data Source: Hospital Discharge Survey, SC Budget & Control Board, Office of Research & Statistics

Substance Abuse Among High School Students

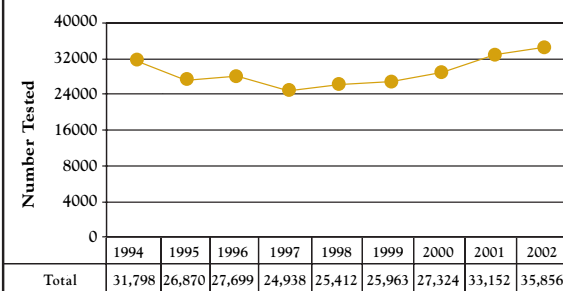


Data Source: Youth Risk Behavior Survey, SCDOE | HP2010

SC 2001 and 2003 are unweighted

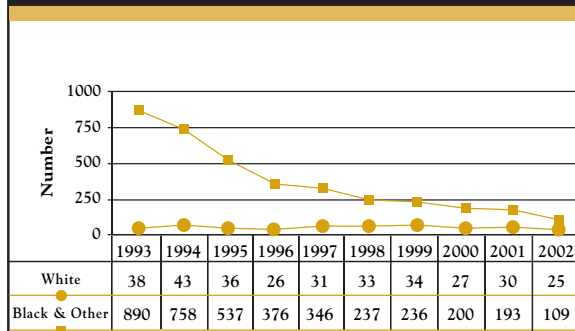
Marijuana = 0.7 Tobacco = 16

HIV Testing in DHEC Clinics Ages 20-44



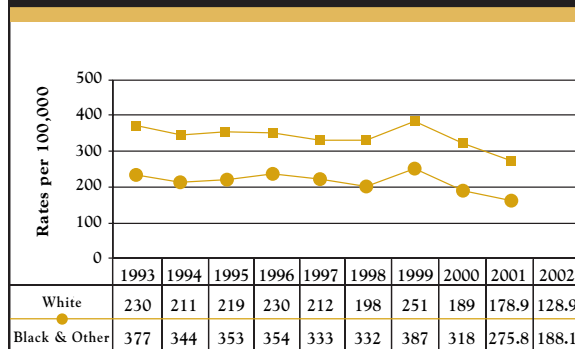
Data Source: Bureau of Laboratories, SC DHEC

Infectious Syphilis All Ages



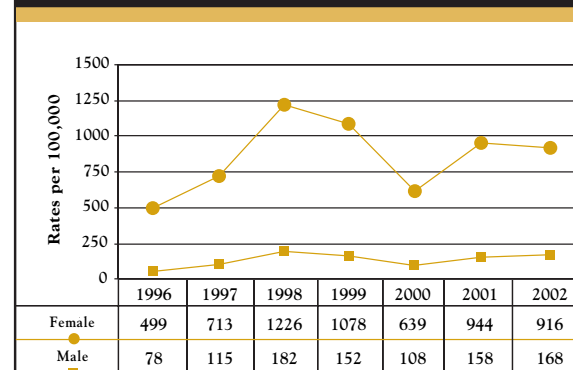
Data Source: SC Reportable Disease Surveillance System, SC DHEC

Pelvic Inflammatory Disease Rates All Ages



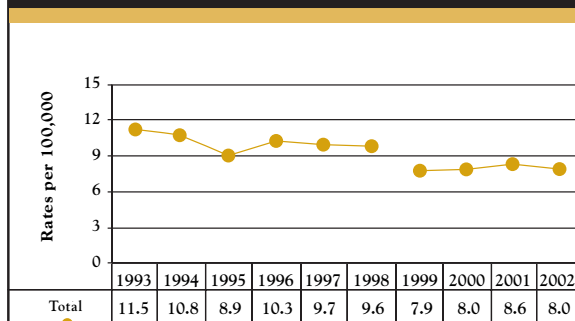
Data Source: Hospital Discharge Survey, SC Budget & Control Board, ORS

Chlamydia Genital Infection Rates Ages 20-44



Data Source: SC Reportable Disease Surveillance System, SC DHEC

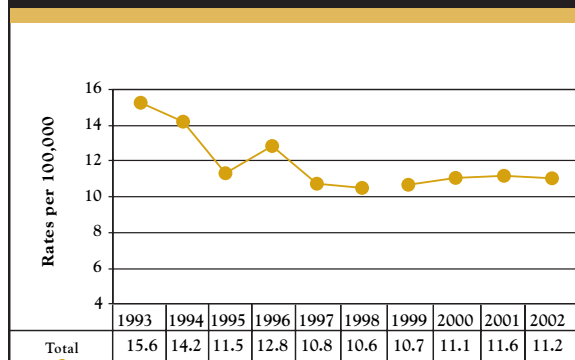
Age-Adjusted Homicide Rates All Ages



Data Source: Vital Statistics, SC DHEC
Years 1999+ used ICD-10

HP2010=3.2

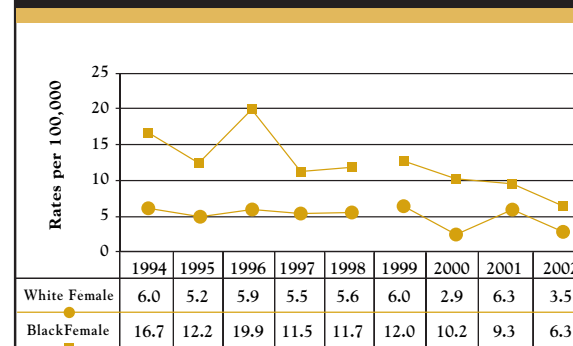
Age-Adjusted Suicide Rates All Ages



Data Source: Vital Statistics, SC DHEC
Years 1999+ used ICD-10

HP2010=6.0

Cervical Cancer Death Rates Ages 45-64

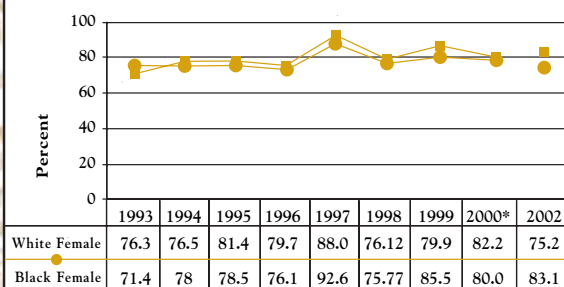


2002 Total Rate=4.4

Data Source: Vital Statistics, SC DHEC
Years 1999+ used ICD-10

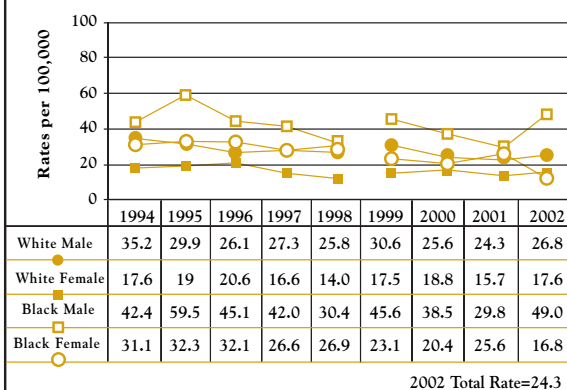
South Carolina Data

Prevalence of PAP Screening (past 3 years), Women Ages 45 and Older



Data Source: Behavior Risk Factor Surveillance System, SC DHEC
*Question not asked on 2001 BRFSS

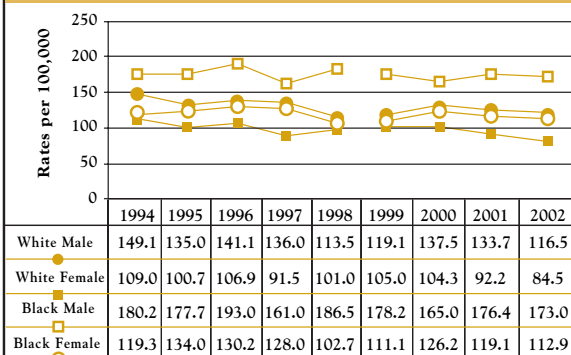
Colorectal Cancer Death Rates Ages 45-64



Data Source: Vital Statistics, SC DHEC
Years 1999+ used ICD-10

2002 Total Rate=24.3

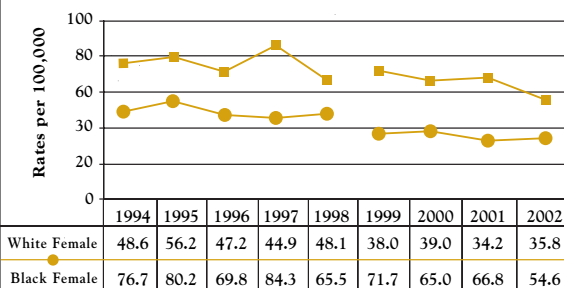
Colorectal Cancer Death Rates Ages 65 and Older



2002 Total Rate=105.3

Data Source: Vital Statistics, SC DHEC
Years 1999+ used ICD-10

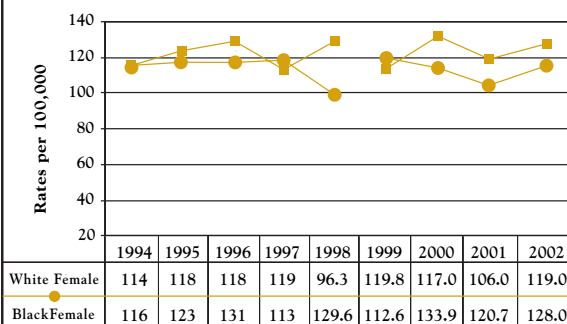
Breast Cancer Death Rates Ages 45-64



2002 Total Rate=40.9

Data Source: Vital Statistics, SC DHEC
Years 1999+ used ICD-10

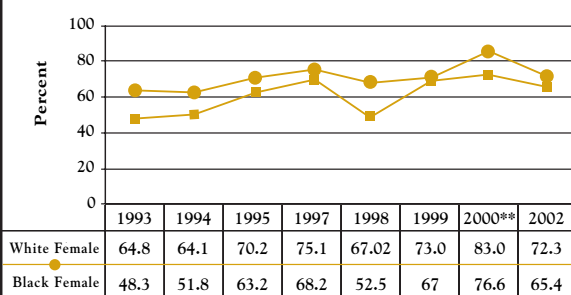
Breast Cancer Death Rates Ages 65 and Older



2002 Total Rate=120.4

Data Source: Vital Statistics, SC DHEC
Years 1999+ used ICD-10

Women 45-64 Receiving a Mammogram & Clinical Breast Exam*

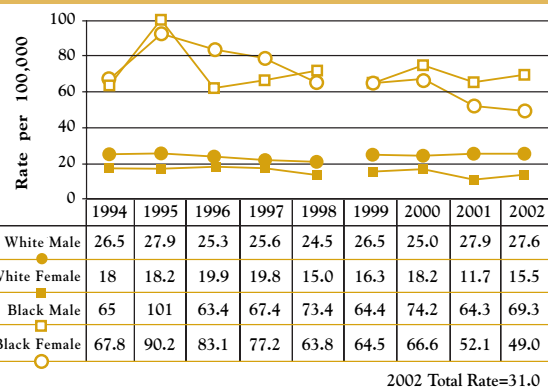


Data Source: Behavior Risk Factor Surveillance System, SC DHEC

* Past two years

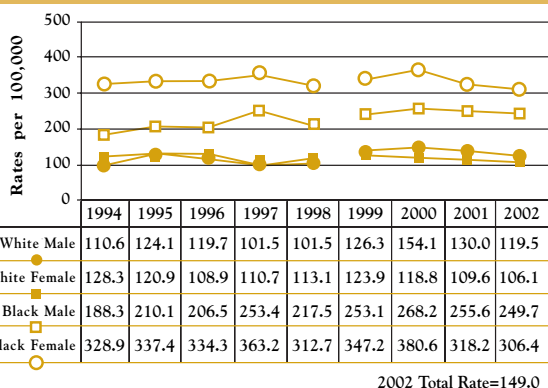
** Question not asked on 2001 BRFSS

Diabetes Death Rates Ages 45-64



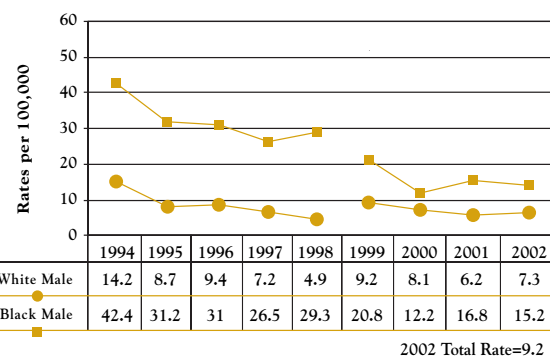
Data Source: Vital Statistics, SC DHEC
Years 1999+ used ICD-10

Diabetes Death Rates Ages 65 and Older



Data Source: Vital Statistics, SC DHEC
Years 1999+ used ICD-10

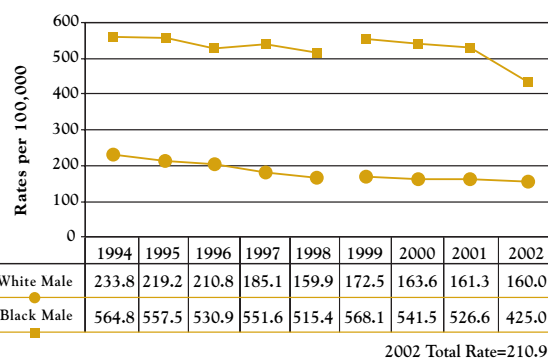
Prostate Cancer Death Rates, Ages 45-64



Data Source: Vital Statistics, SC DHEC
Years 1999+ used ICD-10

HP2010=28.8 (all ages)

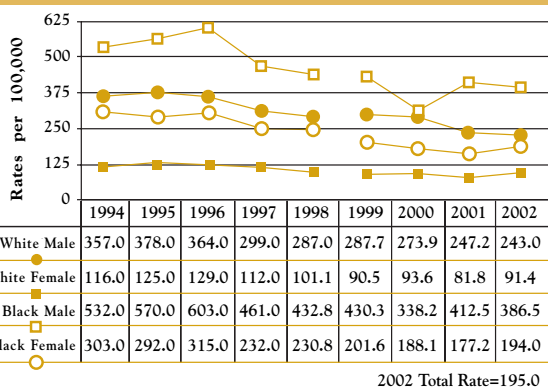
Prostate Cancer Death Rates Ages 65 and Older



Data Source: Vital Statistics, SC DHEC
Years 1999+ used ICD-10

HP2010=28.8 (all ages)

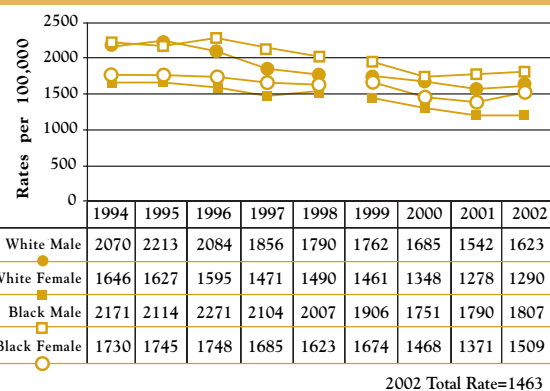
Heart Disease Death Rates Ages 45-64



Data Source: Vital Statistics, SC DHEC
Year 1999+ used ICD-10

HP2010=166 (all ages)

Heart Disease Death Rates Ages 65 and older

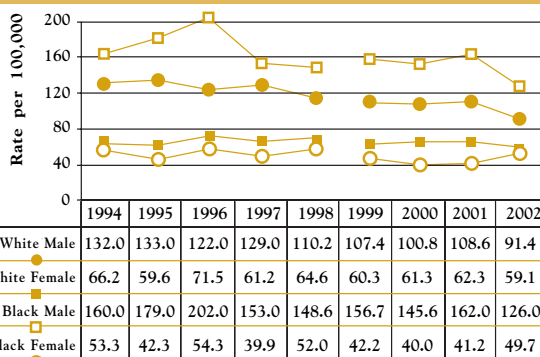


Data Source: Vital Statistics, SC DHEC
Year 1999+ used ICD-10

HP2010=166 (all ages)

South Carolina Data

Lung Cancer Death Rates Ages 45-65

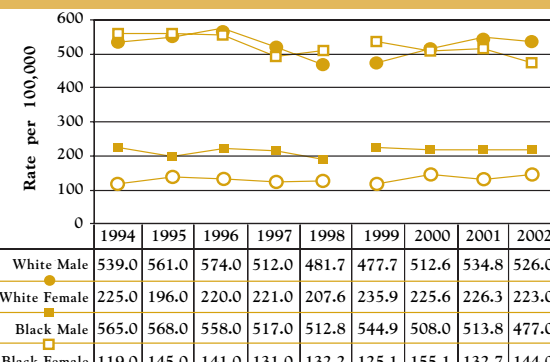


2002 Total Rate=77.0

Data Source: Vital Statistics, SC DHEC
Year 1999+ used ICD-10

HP2010=44.9 (all ages)

Lung Cancer Death Rates Ages 65 and Older

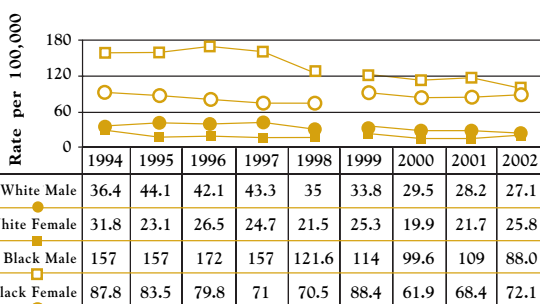


2002 Total Rate=331.2

Data Source: Vital Statistics, SC DHEC
Year 1999+ used ICD-10

HP2010=44.9 (all ages)

Stroke Death Rates Ages 45-64

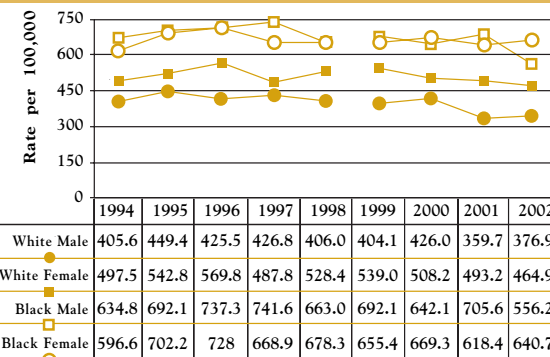


2002 Total Rate=40.2

Data Source: Vital Statistics, SC DHEC
Year 1999+ used ICD-10

HP2010=48 (all ages)

Stroke Death Rates Ages 65 and Older



2002 Total Rate=465.4

Data Source: Vital Statistics, SC DHEC
Year 1999+ used ICD-10

HP2010=48 (all ages)

What is Healthy People 2010?

Throughout this report you have seen references to Healthy People 2010 objectives. These are the nation's health objectives for the first decade of the new century. These objectives are used by states, communities, organizations and others to develop health improvement programs. Healthy People 2010 builds on initiatives pursued over the past two decades. The 1979 Surgeon General's Report, "Healthy People," and "Healthy People 2000: National Health Promotion and Disease Prevention Objectives" both established national health objectives and served as the basis for the development of state and community plans.

Like its predecessors, Healthy People 2010 was developed through a broad consultation process, built on the best scientific knowledge and designed to measure programs over time.

Healthy People 2010 is designed to achieve two overarching goals:

Goal 1: Increase Quality and Years of Healthy Life

Goal 2: Eliminate Health Disparities

The first goal of Healthy People 2010 is to help individuals of all ages increase life expectancy and improve their quality of life. The second goal of Healthy People 2010 is to eliminate health disparities among different segments of the population.

Healthy People 2010 has a number of focus areas and 10 high priority areas for the nation's health. These priorities, the leading health indicators, are:

1. Physical Activity
2. Overweight and Obesity
3. Tobacco Use
4. Substance Abuse
5. Responsible Sexual Behavior
6. Mental Health
7. Injury and Violence
8. Environmental Quality
9. Immunization
10. Access to Health Care

South Carolina is committed to improving the health status in South Carolina by working toward the Healthy People 2010 goals and objectives.



Appendix B

Healthy People 2010 Objectives: South Carolina and United States Data

South Carolina uses Healthy People 2010 goals to measure progress toward health improvement. Each of the 10 Healthy People 2010 leading health indicators has one or more objectives associated with it. As a group, the leading health indicators reflect the major health concerns in the United States at the beginning of the 21st century. They were selected based on their ability to motivate action, the availability of data to measure progress, and their importance as public health issues.



Healthy People Objective Data Sources

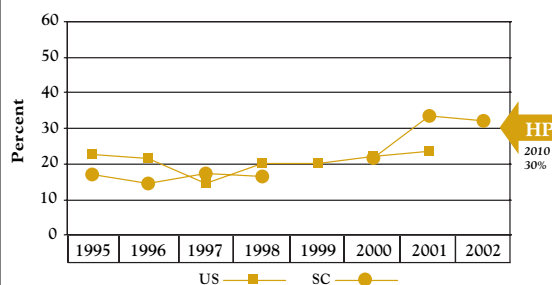
- 01-01** Current Population Survey (CPS), U.S. Census Bureau, Bureau of Labor & Statistics
<http://www.census.gov/>
-
- 08-01a** SC: DHEC Environmental Quality Control (EQC), Bureau of Environmental Services, Division of Air Quality Analysis
<http://www.scdhec.gov/eqc>
- US: Aerometric Information Retrieval System (AIRS), EPA, OAR
<http://www.epa.gov/air/data>
-
- 14-24a** National Immunization Survey (NIS), CDC, NIP and NCHS
<http://www.cdc.gov/nis>
-
- 14-29a** SC: DHEC Behavior Risk Factor Survey (BRFSS), Bureau of Epidemiology
-
- 14-29b** http://www.scdhec.gov/hs/epidata/state_reports.htm
- US: National Health Interview Survey (NHIS), CDC, NCHS
<http://www.cdc.gov/nchs/nhis.htm>
-
- 15-15a** SC: DHEC Vital Records, Office of Public Health Statistics and Information Services
<http://www.scdhec.gov/scan>
-
- 16-06a** US: National Vital Statistics System - Mortality (NVSS-M), CDC, NCHS
<http://www.cdc.gov/nchs/nvss.htm>
-
- 19-02** SC: DHEC Behavior Risk Factor Survey (BRFSS), Bureau of Epidemiology.
http://www.scdhec.gov/hs/epidata/state_reports.htm
- US: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS
<http://www.cdc.gov/nchs/nhanes.htm>
- SC: DHEC Behavior Risk Factor Survey (BRFSS), Bureau of Epidemiology
http://www.scdhec.gov/hs/epidata/state_reports.htm
- US: Behavior Risk Factor Surveillance System (BRFSS), CDC, NCCDPHP
<http://www.cdc.gov/brfss/>

- 22-07** Youth Risk Behavior Surveillance System (YRBSS), CDC, NCCDPHP
- 25-11** <http://www.cdc.gov/nccdphp/dash/yrbs/index.htm>
-
- 26-10a** SC: Youth Risk Behavior Surveillance System (YRBSS), CDC, NCCDPHP
<http://www.cdc.gov/nccdphp/dash/yrbs/index.htm>
- US: National Household Survey on Drug Abuse (NHSDA), SAMHSA
<http://www.samhsa.gov/>
-
- 26-10c** SC: SC Department of Alcohol and Other Drug Abuse Services
<http://www.daodas.state.sc.us/>
- US: National Household Survey on Drug Abuse (NHSDA), SAMHSA
<http://www.samhsa.gov/>
-
- 26-11c** SC: DHEC Behavior Risk Factor Survey (BRFSS), Bureau of Health Services, Division of Epidemiology
<http://www.scdhec.net/hs/epi>
http://www.scdhec.gov/hs/epidata/state_reports.htm
- US: National Household Survey on Drug Abuse (NHSDA), SAMHSA
<http://www.samhsa.gov/>
-
- 27-01a** SC: DHEC Behavior Risk Factor Survey (BRFSS), Bureau of Health Services, Division of Epidemiology
http://www.scdhec.gov/hs/epidata/state_reports.htm
- US: National Health Interview Survey (NHIS), CDC, NCHS
<http://www.cdc.gov/nchs/nhis.htm>
-
- 27-02b** Youth Risk Behavior Surveillance System (YRBSS), CDC, NCCDPHP
<http://www.cdc.gov/nccdphp/dash/yrbs/index.htm>

NA indicates data not available

Healthy People 2010 Objectives: South Carolina and United States Data

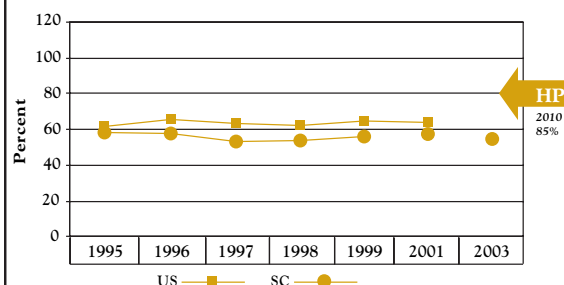
Adult Participation in Regular Physical Activity*, S.C. and U.S.



Data Source: BRFSS

*Adults ages 18 years and older who engage in 30 minutes of moderate physical activity 5 or more days per week.

Adolescent Participation in Vigorous Physical Activity*, S.C. and U.S.

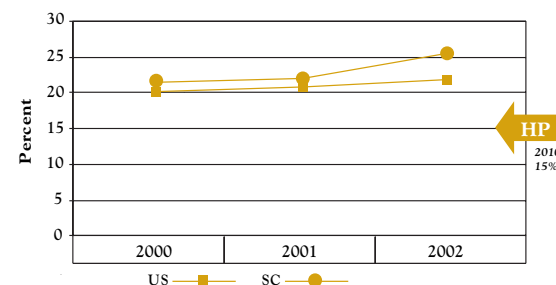


Data Source: YRBSS

*Adolescents in grades 9-12 who engage in 20 minutes of vigorous physical activity 3 or more days per week.

SC 2001 is unweighted

Obese Adults* Age 18 and Older S.C. and U.S.



Data Source: SC BRFSS, US NHANES

*Obesity defined as a BMI of 30² kg/m or more

Physical Activity

22-02 Increase the proportion of adults who engage regularly, preferably daily, in moderate physical activity for at least 30 minutes per day.

Physical Activity

22-07 Increase the proportion of adolescents who engage in vigorous physical activity that promotes cardiorespiratory fitness 3 or more days per week for 20 or more minutes per occasion.

Overweight and Obesity

19-02 Reduce the proportion of adults who are obese.

Adult Participation in Regular Physical Activity, SC by Race

Year	White %	Black %
1995	17.4	18.9
1996	14.5	18.5
1997	18.5	16.0
1998	18.5	16.0
1999	NA	NA
2000	22.7	21.8
2001	33.9	23.3
2002	35.4	20.4

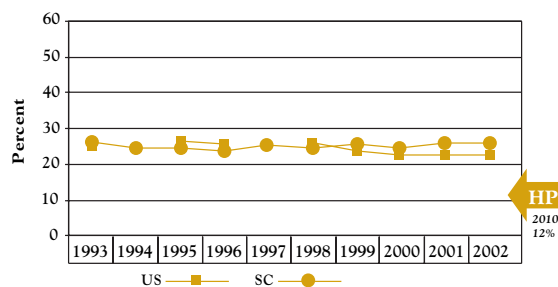
Adolescent Participation in Vigorous Physical Activity, SC by Race

Year	White %	Black %
1991	62.7	52.7
1992	NA	NA
1993	60.8	50.5
1994	NA	NA
1995	59.4	42.5
1996	NA	NA
1997	59.8	44.3
1998	NA	NA
1999	61.8	48.3
2000	NA	NA
2001	64.1	52.2
2002	63.8	46.4

Obese Adults, SC by Race

Year	White %	Black %
2000	18.1	33.6
2001	18.7	35.4
2002	21.5	36.9

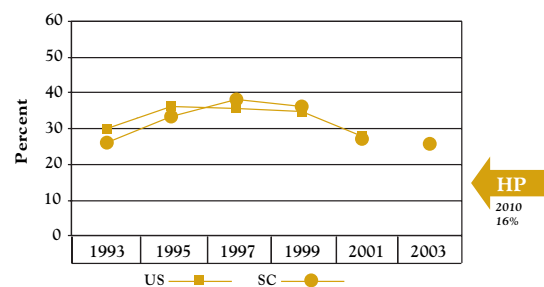
Current Cigarette Smoking* Among Adults, S.C. and U.S.



Data Source: SC BRFSS, US Age-adjusted NHIS

*Adults ages 18 years and older who smoked more than 100 cigarettes in their lifetime and smoked on some or all days in the past month.

Current Cigarette Smoking* Among Adolescents in Grades 9-12, S.C. and U.S.

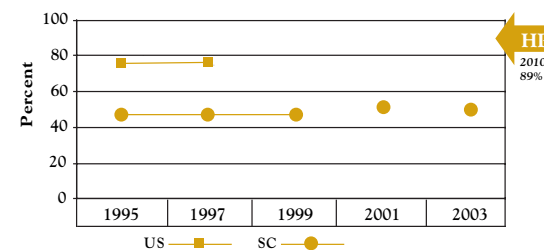


Data Source: YRBSS

*Adolescents who smoked one or more cigarettes in the past 30 days.

SC 2001 is unweighted

U.S. Alcohol & Drug-Free 12-17 Year Olds in Past 30 Days Compared to S.C. Public High School Students



Data Source: SC YRBSS, US SAMHSA

SC 2001 is unweighted

Tobacco Use

27-01a Reduce cigarette smoking by adults.

Tobacco Use

27-02b Reduce cigarette smoking by adolescents.

Substance Abuse

26-10a Increase the proportion of adolescents not using alcohol or any illicit drugs during the past 30 days.

Cigarette Smoking Among Adults, SC by Race

Year	White %	Black %
1993	25.5	20.8
1994	26	18.3
1995	25.5	19.8
1996	26.8	20.1
1997	24.9	19.4
1998	26.5	19.2
1999	25.5	18.3
2000	26.7	19.1
2001	26.7	23.7
2002	28.1	21.3

Cigarette Smoking Among Adolescents in Grades 9-12, SC by Race

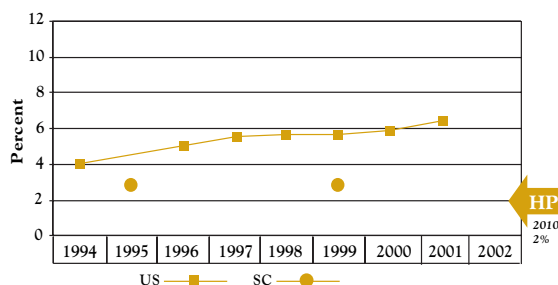
Year	White %	Black %
1993	37.3	10.8
1994	NA	NA
1995	42.0	19.0
1996	NA	NA
1997	47.2	28.4
1998	NA	NA
1999	45.9	22.8
2000	NA	NA
2001	34.7	16.5
2002	NA	NA
2003	32.7	16.7

Adolescents aged 12-17 Years Who Reported No Use of Alcohol or Illicit Drugs in Past 30 Days, SC by Race

Year	White %	Black %
1994	NA	NA
1995	42.6	51.7
1996	NA	NA
1997	42.6	51.1
1998	NA	NA
1999	41.3	53.9
2000	NA	NA
2001	48.2	56.3
2002	NA	NA
2003	46.6	55.7

Healthy People 2010 Objectives: South Carolina and United States Data

Proportion of Adults Using Illicit Drugs in Past 30 Days, S.C. and U.S.



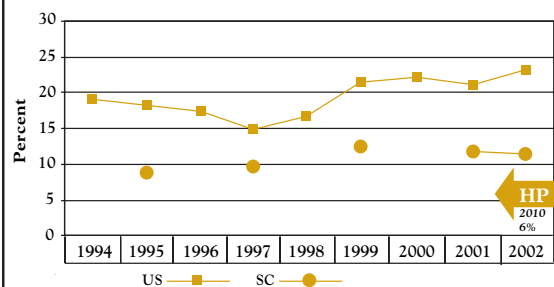
Data Source: SAMHSA, NHSDA

2002 Not Available

Substance Abuse

26-10c Reduce the proportion of adults using illicit drugs during the past 30 days. South Carolina data by race not available.

Proportion of Adults Binge Drinking,* S.C. and U.S.



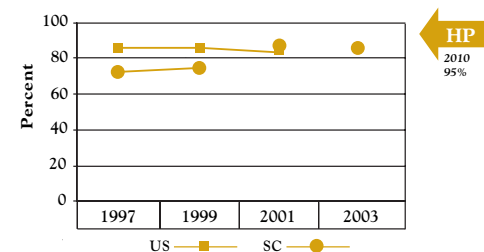
Data Source: SC BRFS, US SAMHSA

*Adults aged 18 years and older who reported having 5 or more drinks on an occasion, one or more times in the past month.

Substance Abuse

26-11c Reduce the proportion of adults engaging in binge drinking of alcoholic beverages during the past month.

Adolescents in Grades 9-12 Who are Not Sexually Active or Sexually Active and Used Condoms, S.C. and U.S.



Data Source: YRBSS

SC 2001 is unweighted

Responsible Sexual Behavior

25-11 Increase the proportion of adolescents who abstain from sexual intercourse or use condoms if currently sexually active.

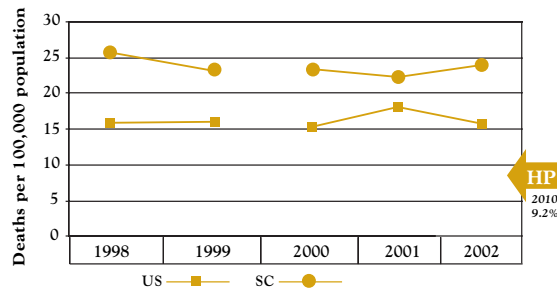
Adults Who Reported Binge Drinking in Past 30 Days, SC by Race

Year	White %	Black %
1994	NA	NA
1995	9.8	7.8
1996	NA	NA
1997	11.2	13.4
1998	NA	NA
1999	13.4	8.6
2000	NA	NA
2001	13.1	9.5
2002	14.1	7.5

Adolescents in Grades 9-12 Who are Not Sexually Active or Sexually Active and Used Condoms, SC by Race

Year	White %	Black %
1997	79.6	70.4
1998	NA	NA
1999	80.6	72.8
2000	NA	NA
2001	86.5	85.9
2002	NA	NA
2003	87.2	85.2

Motor Vehicle Age-Adjusted Death Rates, S.C. and U.S.



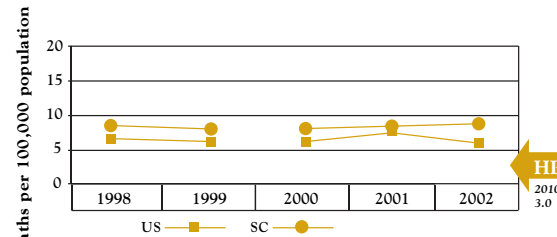
Data Source: SC Vital Records, US NCHS

Years 1999+ used ICD-10

Injury and Violence

15-15a Reduce deaths caused by motor vehicles.

Homicide Age-Adjusted Death Rates, S.C. and U.S.



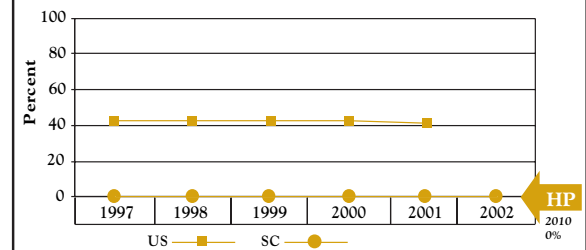
Data Source: SC Vital Records, US NCHS

Years 1999+ used ICD-10

Injury and Violence

15-32 Reduce homicides.

Persons Exposed to Ozone Above EPA Standard, S.C. and U.S.



Data Source: SC DHEC EQC, US EPA

Environmental Quality

08-01a Reduce the proportion of persons exposed to air that does not meet the U.S. Environmental Protection Agency's health-based standards for ozone. South Carolina meets the health based standards for ozone.

Motor Vehicle Age-Adjusted Mortality Rates (per 100,000), SC by Race

Year	White	Black & Other
1998	24.1	29.3
1999	21.2	30.2
2000	22.1	27.6
2001	22.3	25.8
2002	23.8	27.0

Note: For 1998, cause of death classification based on ICD-9; for 1999, cause of death classification based on ICD-10.

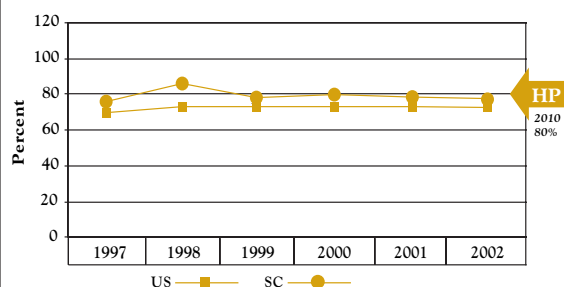
Homicide Age-Adjusted Mortality Rates (per 100,000), SC by Race

Year	White	Black & Other
1998	5.1	16.5
1999	4.7	15.0
2000	5.1	14.4
2001	5.5	15.8
2002	5.0	14.3

Note: For 1998, cause of death classification based on ICD-9; for 1999, cause of death classification based on ICD-10.

Healthy People 2010 Objectives: South Carolina and United States Data

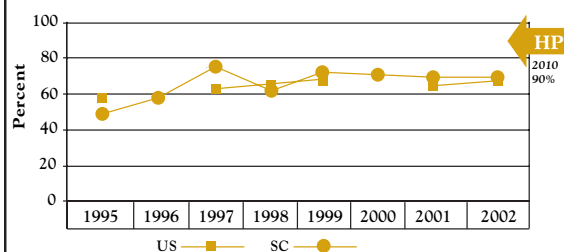
Children Aged 19 to 35 Months Who Received all Recommended Vaccines*, S.C. and U.S.



Data Source: NIS

*4 DTap, 3 polio, 1MMR, 3 Hib, 3 Hep B

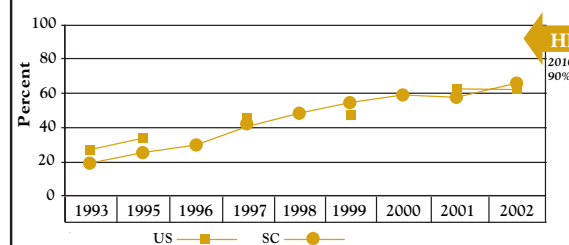
Adults Aged 65 Years and Older Who Received Influenza Vaccine in the Past 12 Months, S.C. and U.S.



Data Source: SC BRFS

U.S. data not given years 1996 and 2000

Adults Aged 65 Years and Older Who Ever Received Pneumococcal Vaccine, S.C. and U.S.



Data Source: SC BRFS

U.S. data not given for years 1996, 1998 and 2000

Immunization

14-24a Increase the proportion of young children who receive all vaccines that have been recommended for universal administration for at least 5 years.

Immunization

14-29a Increase the proportion of non-institutionalized adults 65 years and older who are vaccinated annually against influenza.

Immunization

14-29b Increase the proportion of non-institutionalized adults 65 years old and older ever vaccinated against pneumococcal disease.

Children Aged 19 to 35 months Who Received all Recommended Vaccines, SC by Race

Year	White %	Black %
1997	70.1	80.3
1998	80.6	86.3
1999	81.4	73.2
2000	81.7	73.9
2001	81.9	78.3
2002	NA	NA
2003	83.8	NA

Adults Aged 65 Years and Older Who Received Influenza Vaccine in the Past 12 Months, SC by Race

Year	White %	Black %
1993	50.9	37.8
1994	NA	NA
1995	56.3	34.2
1996	59.4	53.3
1997	75.3	71.5
1998	67.4	44.5
1999	73.2	58.3
2000	72.3	61.9
2001	68.7	56.7*
2002	71.0	64.8

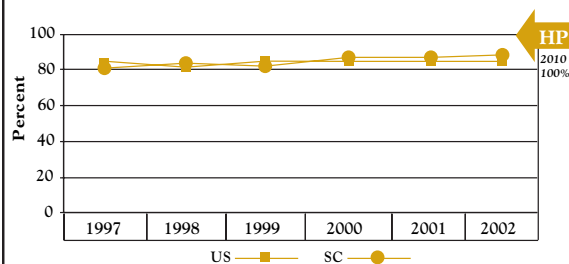
*Interpret with caution: Cell size less than 50.

Adults Aged 65 Years and Older Who Ever Received Pneumococcal Vaccine, SC by Race

Year	White %	Black %
1993	22.0	15.5
1994	NA	NA
1995	30.8	13.0
1996	34.3	26.5
1997	47.0	19.1
1998	56.3	27.3
1999	61.0	38.9
2000	63.9	44.4
2001	63.7	31.4*
2002	67.6	54.2

*Interpret with caution: Cell size less than 50.

Persons Under Age 65 with Health Care Coverage, S.C. and U.S.

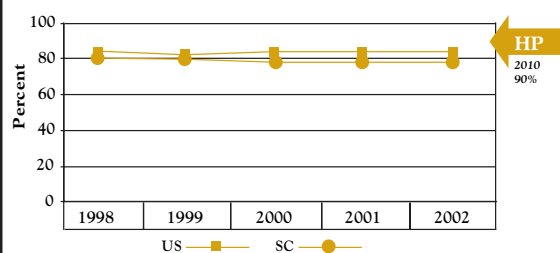


Data Source: CPS, US Census

Access to Health Care

01-01 Increase the proportion of persons with health insurance. South Carolina data by race not available.

Pregnant Women who Began Prenatal Care in the First Trimester, S.C. and U.S.



Data Source: SC Vital Records, US NCHS

Access to Health Care

16-06a Increase the proportion of pregnant women who begin prenatal care in the first trimester of pregnancy.

Pregnant Women who Began Prenatal Care in the First Trimester, SC by Race

Year	White %	Black %
1998	86.1	69.6
1999	85.0	69.4
2000	83.5	70.3
2001	83.8	69.0
2002	82.0	69.6

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South Carolina Department of Health and Environmental Control

Shrimp, crab, oysters, fish—the South Carolina coast along the Atlantic offers a bounty of culinary delights. You can gather your own or watch your dinner arrive at weathered docks in bucolic fishing villages. Then you walk it off in historic cities and towns or along the 187 miles of coast.

Wish you were here!



To our family
and friends
in other states

There are fresh peaches in the foothills and apple orchards galore. When you see the majestic South Carolina mountains, you can't help but want to walk the trails where American Indians once roamed. We took in some fly-fishing and stood awestruck at many of the waterfalls that grace the Upstate region in the Blue Ridge Mountains.

Wish you were here!



To our family
and friends
in other states

The South Carolina "Midlands" area is rich in natural resources, beautifully restored 19th century homes, and lovely gardens filled with flowering bushes called azaleas and camellias. You don't have to go far from the city to explore pine woodlands and see deer and other wildlife in their natural habitat. We're on our way now to kayak down a river.

Wish you were here!



To our family
and friends
in other states



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